



81408-4400 sequence listing.txt
SEQUENCE LISTING

<110> Yayon, Avner
Rom, Eran
Thomassen-wolf, Elisabeth
Borges, Eric

<120> ANTIBODIES THAT BLOCK RECEPTOR PROTEIN TYROSINE KINASE ACTIVATION,
METHODS OF SCREENING AND USES THEREOF

<130> 81408-4400

<140> US 10/734,661
<141> 2003-12-15

<150> US 60/299,187
<151> 2001-06-20

<150> PCT/IL02/00494
<151> 2002-06-20

<160> 106

<170> PatentIn version 3.2

<210> 1
<211> 806
<212> PRT
<213> Homo sapiens

<300>
<308> np_000133
<309> 2001-02-21
<313> (1)..(806)

<400> 1

Met Gly Ala Pro Ala Cys Ala Leu Ala Leu Cys Val Ala Val Ala Ile
1 5 10 15

Val Ala Gly Ala Ser Ser Glu Ser Leu Gly Thr Glu Gln Arg Val Val
20 25 30

Gly Arg Ala Ala Glu Val Pro Gly Pro Glu Pro Gly Gln Gln Glu Gln
35 40 45

Leu Val Phe Gly Ser Gly Asp Ala Val Glu Leu Ser Cys Pro Pro Pro
50 55 60

Gly Gly Gly Pro Met Gly Pro Thr Val Trp Val Lys Asp Gly Thr Gly
65 70 75 80

Leu Val Pro Ser Glu Arg Val Leu Val Gly Pro Gln Arg Leu Gln Val
85 90 95

Leu Asn Ala Ser His Glu Asp Ser Gly Ala Tyr Ser Cys Arg Gln Arg
100 105 110

81408-4400 sequence listing.txt

Leu Thr Gln Arg Val Leu Cys His Phe Ser Val Arg Val Thr Asp Ala
115 120 125

Pro Ser Ser Gly Asp Asp Glu Asp Gly Glu Asp Glu Ala Glu Asp Thr
130 135 140

Gly Val Asp Thr Gly Ala Pro Tyr Trp Thr Arg Pro Glu Arg Met Asp
145 150 155 160

Lys Lys Leu Leu Ala Val Pro Ala Ala Asn Thr Val Arg Phe Arg Cys
165 170 175

Pro Ala Ala Gly Asn Pro Thr Pro Ser Ile Ser Trp Leu Lys Asn Gly
180 185 190

Arg Glu Phe Arg Gly Glu His Arg Ile Gly Gly Ile Lys Leu Arg His
195 200 205

Gln Gln Trp Ser Leu Val Met Glu Ser Val Val Pro Ser Asp Arg Gly
210 215 220

Asn Tyr Thr Cys Val Val Glu Asn Lys Phe Gly Ser Ile Arg Gln Thr
225 230 235 240

Tyr Thr Leu Asp Val Leu Glu Arg Ser Pro His Arg Pro Ile Leu Gln
245 250 255

Ala Gly Leu Pro Ala Asn Gln Thr Ala Val Leu Gly Ser Asp Val Glu
260 265 270

Phe His Cys Lys Val Tyr Ser Asp Ala Gln Pro His Ile Gln Trp Leu
275 280 285

Lys His Val Glu Val Asn Gly Ser Lys Val Gly Pro Asp Gly Thr Pro
290 295 300

Tyr Val Thr Val Leu Lys Thr Ala Gly Ala Asn Thr Thr Asp Lys Glu
305 310 315 320

Leu Glu Val Leu Ser Leu His Asn Val Thr Phe Glu Asp Ala Gly Glu
325 330 335

Tyr Thr Cys Leu Ala Gly Asn Ser Ile Gly Phe Ser His His Ser Ala
340 345 350

Trp Leu Val Val Leu Pro Ala Glu Glu Glu Leu Val Glu Ala Asp Glu
Page 2

81408-4400 sequence listing.txt

355
 360
 365

Ala Gly Ser Val Tyr Ala Gly Ile Leu Ser Tyr Gly Val Gly Phe Phe
 370 375 380

Leu Phe Ile Leu Val Val Ala Ala Val Thr Leu Cys Arg Leu Arg Ser
 385 390 395 400

Pro Pro Lys Lys Gly Leu Gly Ser Pro Thr Val His Lys Ile Ser Arg
 405 410 415

Phe Pro Leu Lys Arg Gln Val Ser Leu Glu Ser Asn Ala Ser Met Ser
 420 425 430

Ser Asn Thr Pro Leu Val Arg Ile Ala Arg Leu Ser Ser Gly Glu Gly
 435 440 445

Pro Thr Leu Ala Asn Val Ser Glu Leu Glu Leu Pro Ala Asp Pro Lys
 450 455 460

Trp Glu Leu Ser Arg Ala Arg Leu Thr Leu Gly Lys Pro Leu Gly Glu
 465 470 475 480

Gly Cys Phe Gly Gln Val Val Met Ala Glu Ala Ile Gly Ile Asp Lys
 485 490 495

Asp Arg Ala Ala Lys Pro Val Thr Val Ala Val Lys Met Leu Lys Asp
 500 505 510

Asp Ala Thr Asp Lys Asp Leu Ser Asp Leu Val Ser Glu Met Glu Met
 515 520 525

Met Lys Met Ile Gly Lys His Lys Asn Ile Ile Asn Leu Leu Gly Ala
 530 535 540

Cys Thr Gln Gly Gly Pro Leu Tyr Val Leu Val Glu Tyr Ala Ala Lys
 545 550 555 560

Gly Asn Leu Arg Glu Phe Leu Arg Ala Arg Arg Pro Pro Gly Leu Asp
 565 570 575

Tyr Ser Phe Asp Thr Cys Lys Pro Pro Glu Glu Gln Leu Thr Phe Lys
 580 585 590

Asp Leu Val Ser Cys Ala Tyr Gln Val Ala Arg Gly Met Glu Tyr Leu
 595 600 605

81408-4400 sequence listing.txt

Ala Ser Gln Lys Cys Ile His Arg Asp Leu Ala Ala Arg Asn Val Leu
610 615 620

Val Thr Glu Asp Asn Val Met Lys Ile Ala Asp Phe Gly Leu Ala Arg
625 630 635 640

Asp Val His Asn Leu Asp Tyr Tyr Lys Lys Thr Thr Asn Gly Arg Leu
645 650 655

Pro Val Lys Trp Met Ala Pro Glu Ala Leu Phe Asp Arg Val Tyr Thr
660 665 670

His Gln Ser Asp Val Trp Ser Phe Gly Val Leu Leu Trp Glu Ile Phe
675 680 685

Thr Leu Gly Gly Ser Pro Tyr Pro Gly Ile Pro Val Glu Glu Leu Phe
690 695 700

Lys Leu Leu Lys Glu Gly His Arg Met Asp Lys Pro Ala Asn Cys Thr
705 710 715 720

His Asp Leu Tyr Met Ile Met Arg Glu Cys Trp His Ala Ala Pro Ser
725 730 735

Gln Arg Pro Thr Phe Lys Gln Leu Val Glu Asp Leu Asp Arg Val Leu
740 745 750

Thr Val Thr Ser Thr Asp Glu Tyr Leu Asp Leu Ser Ala Pro Phe Glu
755 760 765

Gln Tyr Ser Pro Gly Gly Gln Asp Thr Pro Ser Ser Ser Ser Gly
770 775 780

Asp Asp Ser Val Phe Ala His Asp Leu Leu Pro Pro Ala Pro Pro Ser
785 790 795 800

Ser Gly Gly Ser Arg Thr
805

<210> 2
<211> 32
<212> DNA
<213> Artificial Sequence

<220>
<223> artificial primer

<400> 2
acgtgctagc tgagtccttg gggacggagc ag

81408-4400 sequence listing.txt

<210> 3
 <211> 55
 <212> DNA
 <213> Artificial Sequence

<220>
 <223> artificial primer

<400> 3
 acgtctcgag ttaatggtga tggatgatggt gtgcatacac acagcccgcc tcgtc 55

<210> 4
 <211> 1147
 <212> DNA
 <213> Homo sapiens

<300>
 <308> m58051
 <309> 1994-11-08
 <313> (1)..(1147)

<400> 4
 gcgcgctgcc tgaggacgcc gcggcccccg ccccgccat gggcgcccct gcctgcgccc 60
 tcgcgctctg cgtggccgtg gccatcgtgg ccggcgccct ctcggagtcc ttggggacgg 120
 agcagcgctg cgtggggcga gcggcagaag tcccgggccc agagcccggc cagcaggagc 180
 agttggtctt cggcagcggg gatgctgtgg agctgagctg tccccgccc gggggtggtc 240
 ccatggggcc cactgtctgg gtcaaggatg gcacagggct ggtgccctcg gagcgtgtcc 300
 tgggtggggcc ccagcggctg caggtgtcta atgcctccca cgaggactcc ggggcctaca 360
 gctgccggca gcggctcacg cagcgcgtac tgtgccactt cagtgtgcgg gtgacagacg 420
 ctccatcctc gggagatgac gaagacgggg aggacgaggc tgaggacaca ggtgtggaca 480
 caggggcccc ttactggaca cggcccagac ggatggacaa gaagctgctg gccgtgccgg 540
 ccgccaacac cgtccgcttc cgctgcccag ccgctggcaa cccactccc tccatctcct 600
 ggctgaagaa cggcagggag ttccgcggcg agcaccgcat tggaggcatc aagctgcggc 660
 atcagcagtg gagcctggtc atggaaagcg tggtgccctc ggaccgcggc aactacacct 720
 gcgtcgtgga gaacaagttt ggcagcatcc ggcagacgta cacgctggac gtgctggagc 780
 gctccccgca ccggcccatc ctgcaggcgg ggctgccggc caaccagacg gcggtgctgg 840
 gcagcgacgt ggagttccac tgcaagggtg acagtgcgc acagccccac atccagtggc 900
 tcaagcacgt ggaggtgaac ggcagcaagg tgggcccga cggcacaccc tacgttaccg 960
 tgctcaagac ggcgggctgct aacaccaccg acaaggagct agagggttctc tccttgacac 1020
 acgtcacctt tgaggacgcc ggggagtaca cctgcctggc gggcaattct attgggtttt 1080
 ctcatcactc tgcgtggctg gtggtgctgc cagccgagga ggagctggtg gaggctgacg 1140
 aggcggg 1147

81408-4400 sequence listing.txt

<210> 5
 <211> 5695
 <212> DNA
 <213> EXPRESSION VECTOR pCEP-PU/AC7

<400> 5
 gacggatcgg gagatctccc gatccccctat ggtcgactct cagtacaatc tgctctgatg 60
 ccgcatagtt aagccagtat ctgctccctg cttgtgtgtt ggaggtcgct gagtagtgcg 120
 cgagcaaaat ttaagctaca acaaggcaag gcttgaccga caattgcatg aagaatctgc 180
 ttagggttag gcgttttgcg ctgcttcgcg atgtacgggc cagatatacg cgttgacatt 240
 gattattgac tagttattaa tagtaatcaa ttacgggggtc attagttcat agcccatata 300
 tggagttccg cgttacataa cttacggtaa atggcccgc tggctgaccg cccaacgacc 360
 cccgccatt gacgtcaata atgacgatg ttcccatagt aacgccaata gggactttcc 420
 attgacgtca atgggtggac tatttacggg aaactgcccc cttggcagta catcaagtgt 480
 atcatatgcc aagtacgccc cctattgacg tcaatgacgg taaatggccc gcctggcatt 540
 atgccagta catgacctta tgggactttc ctacttgga gtacatctac gtattagtca 600
 tcgctattac catggtgatg cggttttggc agtacatcaa tgggcgtgga tagcggtttg 660
 actcacgggg atttccaagt ctccaccca ttgacgtcaa tgggagttt ttttggcacc 720
 aaaatcaacg ggactttcca aaatgtcgta acaactccgc ccattgacg caaatgggcg 780
 gtaggcgtgt acggtgggag gtctatataa gcagagctct ctggctaact agagaaccca 840
 ctgcttactg gcttatcgaa attaatacga ctactatag ggagaccaa gctggctagc 900
 gtttaaaactt aagcttggtg ccgagctcgg atccccgtcg tgcattctatc gaaggctcgtg 960
 gagatcccga ggagcccaa tcttgtgaca aaactcacac atgcccaccg tgcccagcac 1020
 ctgaactcct ggggggaccg tcagtcttcc tcttcccccc aaaaccaag gacaccctca 1080
 tgatctcccg gaccctgag gtcacatgcg tgggtggtgga cgtgagccac gaagaccctg 1140
 aggtcaagtt caactggtac gtggacggcg tggagggtgca taatgccaag acaaagccgc 1200
 gggaggagca gtacaacagc acgtaccggg tggtcagcgt cctcaccgtc ctgcaccagg 1260
 actggctgaa tggcaaggag tacaagtgc aggtctccaa caaagccctc ccagccccc 1320
 tcgagaaaac catctccaaa gccaaagggc agccccgaga accacaggtg tacaccctgc 1380
 ccccatcccg ggatgagctg accaagaacc aggtcagcct gacctgcctg gtcaaaggct 1440
 tctatcccag cgacatcgcc gtggagtggg agagcaatgg gcagccggag acaactaca 1500
 agaccacgcc tcccgtgctg gactccgacg gctccttctt cctctacagc aagctcaccg 1560
 tggacaagag cagggtggcag caggggaacg tcttctcatg ctccgtgatg catgaggctc 1620
 tgcacaacca ctacacgcag aagagcctct ccctgtctcc gggtaaata tctagagggc 1680

81408-4400 sequence listing.txt

ccgttttaaac	ccgctgatca	gcctcgactg	tgccttctag	ttgccagcca	tctgttgttt	1740
gccccctccc	cgtgccttcc	ttgaccctgg	aagggtgccac	tcccactgtc	ctttccta	1800
aaaatgagga	aattgcatcg	cattgtctga	gtaggtgtca	ttctattctg	gggggtgggg	1860
tggggcagga	cagcaagggg	gaggattggg	aagacaatag	caggcatgct	ggggatgcgg	1920
tgggctctat	ggcttctgag	gcggaaagaa	ccagctgggg	ctctaggggg	tatccccacg	1980
cgccctgtag	cggcgcatta	agcgcggcgg	gtgtggtggt	tacgcgcagc	gtgaccgcta	2040
cacttgccag	cgccctagcg	cccgtcctt	tcgctttctt	cccttccttt	ctcgccacgt	2100
tcgccggctt	tccccgtcaa	gctctaaatc	ggggcatccc	tttaggggtc	cgatttagtg	2160
ctttacggca	cctcgacccc	aaaaaacttg	attaggggtga	tggttcacgt	agtgggcat	2220
cgccctgata	gacggttttt	cgccctttga	cgttggagtc	cacgttcttt	aatagtggac	2280
tcttgttcca	aactggaaca	acactcaacc	ctatctcggt	ctattctttt	gatttataag	2340
ggattttggg	gatttcggcc	tattggttaa	aaaatgagct	gatttaacaa	aaatttaacg	2400
cgaattaatt	ctgtggaatg	tgtgtcagtt	aggggtgtga	aagtccccag	gctccccagg	2460
caggcagaag	tatgcaaagc	atgcatctca	attagtcagc	aaccagggtg	ggaaagtccc	2520
caggctcccc	agcaggcaga	agtatgcaaa	gcatgcatct	caattagtc	gcaaccatag	2580
tcccgccctt	aactccgccc	atcccgcgcc	taactccgcc	cagttccgcc	cattctccgc	2640
cccatggctg	actaattttt	tttatttatg	cagaggccga	ggccgcctct	gcctctgagc	2700
tattccagaa	gtagtgagga	ggcttttttg	gaggcctagg	cttttgcaaa	aagctccccg	2760
gagcttgtat	atccattttc	ggatctgata	agcacgtgtt	gacaattaat	catcggcata	2820
gtatatcggc	atagtataat	acgacaaggt	gaggaactaa	accatggcca	agttgaccag	2880
tgccgttccg	gtgctcaccg	cgcgcgacgt	cgccggagcg	gtcgagttct	ggaccgaccg	2940
gctcgggttc	tcccgggact	tcgtggagga	cgacttcgcc	ggtgtggtcc	gggacgacgt	3000
gaccctgttc	atcagcgcg	tccaggacca	ggtggtgccc	gacaacaccc	tggcctgggt	3060
gtgggtgcgc	ggcctggacg	agctgtacgc	cgagtggtcg	gaggtcgtgt	ccacgaactt	3120
ccgggacgcc	tccggggccg	ccatgaccga	gatcggcgag	cagccgtggg	ggcgggagtt	3180
cgccctgcgc	gacccggccg	gcaactgcgt	gcacttcgtg	gccgaggagc	aggactgaca	3240
cgtgctacga	gatttcgatt	ccaccgccgc	cttctatgaa	aggttgggct	tcggaatcgt	3300
tttccgggac	gccggctgga	tgatcctcca	gcgcggggat	ctcatgctgg	agttcttcgc	3360
ccaccccaac	ttgtttattg	cagcttataa	tggttacaaa	taaagcaata	gcatcacaaa	3420
tttcacaaat	aaagcatttt	tttactgca	ttctagttgt	ggtttgtcca	aactcatcaa	3480
tgtatcttat	catgtctgta	taccgtcgac	ctctagctag	agcttggcgt	aatcatggtc	3540

81408-4400 sequence listing.txt

atagctgttt cctgtgtgaa attgttatcc gctcacaatt ccacacaaca tacgagccgg	3600
aagcataaag tgtaaagcct ggggtgccta atgagtgagc taactcacat taattgcgtt	3660
gcgctcactg cccgctttcc agtcgggaaa cctgtcgtgc cagctgcatt aatgaatcgg	3720
ccaacgcgcg gggagaggcg gtttgcgat tgggcgctct tccgcttcct cgctcactga	3780
ctcgtgcgc tcggtcggtt ggctgcggcg agcgggtatca gctcactcaa aggcggtaat	3840
acggttatcc acagaatcag gggataacgc aggaagaac atgtgagcaa aaggccagca	3900
aaaggccagg aaccgtaaaa aggccgcgtt gctggcggtt ttccataggc tccgcccccc	3960
tgacgagcat cacaaaaatc gacgctcaag tcagagggtg cgaaaccga caggactata	4020
aagataccag gcgtttcccc ctggaagctc cctcgtgcgc tctcctgttc cgaccctgcc	4080
gcttaccgga tacctgtccg cttttctccc ttcgggaagc gtggcgcttt ctcaatgctc	4140
acgctgtagg tatctcagtt cgggtgtaggt cgttcgctcc aagctgggct gtgtgcacga	4200
acccccggt cagcccgaac gctgcgcctt atccggtaac tatcgtcttg agtccaaccc	4260
ggtaagacac gacttatcgc cactggcagc agccactggt aacaggatta gcagagcgag	4320
gtatgtaggc ggtgctacag agttcttgaa gtggtggcct aactacggct acactagaag	4380
gacagtattt ggtatctgcg ctctgctgaa gccagttacc ttcggaaaaa gagttggtag	4440
ctcttgatcc ggcaaaaaa ccaccgctgg tagcggtggt ttttttgttt gcaagcagca	4500
gattacgcgc agaaaaaaag gatctcaaga agatcctttg atcttttcta cggggtctga	4560
cgctcagtgg aacgaaaact cacgttaagg gattttggtc atgagattat caaaaaggat	4620
cttcacctag atccttttaa attaaaaatg aagttttaaa tcaatctaaa gtatatatga	4680
gtaaacttgg tctgacagtt accaatgctt aatcagtga gacacatatc cagcgatctg	4740
tctatttcgt tcatccatag ttgcctgact ccccgctcgt tagataacta cgatacggga	4800
gggcttacca tctggcccca gtgctgcaat gataccgcga gaccacgct caccggctcc	4860
agatttatca gcaataaacc agccagccgg aagggccgag cgcagaagtg gtcctgcaac	4920
tttatccgcc tccatccagt ctattaattg ttgccgggaa gctagagtaa gtagttcgcc	4980
agttaatagt ttgcgcaacg ttgttgccat tgctacaggc atcgtggtgt cacgctcgtc	5040
gtttggtatg gcttcattca gctccggttc ccaacgatca aggcgagtta catgatcccc	5100
catgttggtc aaaaaagcgg ttagctcctt cggctcctccg atcgttgtca gaagtaagtt	5160
ggccgcagtg ttatcactca tggttatggc agcactgcat aattctctta ctgtcatgcc	5220
atccgtaaga tgcttttctg tgactggtga gtactcaacc aagtcattct gagaatagt	5280
tatgcccga ccgagttgct cttgcccggc gtcaatacgg gataataccg cgccacatag	5340
cagaacttta aaagtgtc tcatggaaa acgttcttcg gggcgaaaac tctcaaggat	5400
cttaccgctg ttgagatcca gttcgatgta acccactcgt gcacccaact gatcttcagc	5460

81408-4400 sequence listing.txt

atcttttact ttcaccagcg tttctgggtg agcaaaaaca ggaaggcaaa atgccgcaaa 5520
aaaggggaata agggcgacac ggaaatgttg aatactcata ctcttccttt ttcaatatta 5580
ttgaagcatt tatcaggggtt attgtctcat gagcggatac atatttgaat gtatttagaa 5640
aaataaaciaa ataggggttc cgcgcacatt tccccgaaaa gtgccacctg acgtc 5695

<210> 6
<211> 235
<212> PRT
<213> SYNTHETIC

<220>
<221> misc_feature
<223> Fc domain of Immunoglobulin

<400> 6

Asp Pro Glu Glu Pro Lys Ser Cys Asp Lys Thr His Thr Cys Pro Pro
1 5 10 15

Cys Pro Ala Pro Glu Leu Leu Gly Gly Pro Ser Val Phe Leu Phe Pro
20 25 30

Pro Lys Pro Lys Asp Thr Leu Met Ile Ser Arg Thr Pro Glu Val Thr
35 40 45

Cys Val Val Val Asp Val Ser His Glu Asp Pro Glu Val Lys Phe Asn
50 55 60

Trp Tyr Val Asp Gly Val Glu Val His Asn Ala Lys Thr Lys Pro Arg
65 70 75 80

Glu Glu Gln Tyr Asn Ser Thr Tyr Arg Val Val Ser Val Leu Thr Val
85 90 95

Leu His Gln Asp Trp Leu Asn Gly Lys Glu Tyr Lys Cys Lys Val Ser
100 105 110

Asn Lys Ala Leu Pro Ala Pro Ile Glu Lys Thr Ile Ser Lys Ala Lys
115 120 125

Gly Gln Pro Arg Glu Pro Gln Val Tyr Thr Leu Pro Pro Ser Arg Asp
130 135 140

Glu Leu Thr Lys Asn Gln Val Ser Leu Thr Cys Leu Val Lys Gly Phe
145 150 155 160

Tyr Pro Ser Asp Ile Ala Val Glu Trp Glu Ser Asn Gly Gln Pro Glu
Page 9

81408-4400 sequence listing.txt

165

170

175

Asn Asn Tyr Lys Thr Thr Pro Pro Val Leu Asp Ser Asp Gly Ser Phe
180 185 190

Phe Leu Tyr Ser Lys Leu Thr Val Asp Lys Ser Arg Trp Gln Gln Gly
195 200 205

Asn Val Phe Ser Cys Ser Val Met His Glu Ala Leu His Asn His Tyr
210 215 220

Thr Gln Lys Ser Leu Ser Leu Ser Pro Gly Lys
225 230 235

<210> 7
<211> 1078
<212> DNA
<213> Homo sapiens

<220>
<221> mutation
<222> (1046)..(1048)
<223> BASE PAIRS ENCODING THANATOPHORIC DYSPLASIA (TD) SUBSTITUTION IN
FGFR3

<400> 7
tgagtccttg gggacggagc agcgcgtcgt ggggcgagcg gcagaagtcc cgggccccaga 60
gcccggccag caggagcagt tggctcttcg cagcggggat gctgtggagc tgagctgtcc 120
cccgcccggg ggtggtccca tggggcccac tgtctgggtc aaggatggca cagggctggt 180
gccctcggag cgtgtccttg tggggcccca gcggctgcag gtgctgaatg cctcccacga 240
ggactccggg gcctacagct gccggcagcg gctcacgcag cgcgtactgt gccacttcag 300
tgtgcggggtg acagacgctc catcctcggg agatgacgaa gacggggagg acgaggctga 360
ggacacaggt gtggacacag gggcccccta ctggacacgg ccgagcgga tggacaagaa 420
gctgctggcc gtgccggccg ccaacaccgt ccgcttccgc tgcccagccg ctggcaaccc 480
cactccctcc atctcctggc tgaagaacgg cagggaagttc cgcggcgagc accgcattgg 540
agggatcaag ctgcggcatc agcagtggag cctgggtcatg gaaagcgtgg tgccctcgga 600
ccgcggcaac tacacctgcg tcgtggagaa caagtttggc agcatccggc agacgtacac 660
gctggacgtg ctggagcgct ccccgacccg gcccatcctg caggcggggc tgccggccaa 720
ccagacggcg gtgctgggca gcgacgtgga gttccactgc aagggtgtaca gtgacgcaca 780
gccccacatc cagtggctca agcacgtgga ggtgaacggc agcaagggtg gcccgacgg 840
cacaccctac gttaccgtgc tcaagacggc gggcgctaac accaccgaca aggagctaga 900
ggttctctcc ttgcacaacg tcacctttga ggacgccggg gagtacacct gcctggcggg 960

81408-4400 sequence listing.txt

caattctatt gggttttctc atcactctgc gtggctggtg gtgctgccag ccgaggagga 1020
gctggtggag gctgacgagg cgggctgtgt gtatgcacac catcaccatc accattaa 1078

<210> 8
<211> 9
<212> PRT
<213> Artificial Sequence

<220>
<223> CDR domain from phage library

<400> 8

Asp Phe Leu Gly Tyr Glu Phe Asp Tyr
1 5

<210> 9
<211> 9
<212> PRT
<213> Artificial Sequence

<220>
<223> CDR domain from phage library

<400> 9

Gln Ser Tyr Asp Tyr Ser Ala Asp Tyr
1 5

<210> 10
<211> 17
<212> PRT
<213> Artificial Sequence

<220>
<223> CDR domain from phage library

<400> 10

Tyr Tyr Gly Ser Ser Leu Tyr His Tyr Val Phe Gly Gly Phe Ile Asp
1 5 10 15

Tyr

<210> 11
<211> 7
<212> PRT
<213> Artificial Sequence

<220>
<223> CDR domain from phage library

<400> 11

Gln Ser His His Phe Tyr Glu

81408-4400 sequence listing.txt

1 5

<210> 12
<211> 20
<212> PRT
<213> Artificial Sequence

<220>
<223> CDR domain from phage library

<400> 12

Tyr His Ser Trp Tyr Glu Met Gly Tyr Tyr Gly Ser Thr Val Gly Tyr
1 5 10 15

Met Phe Asp Tyr
20

<210> 13
<211> 8
<212> PRT
<213> Artificial Sequence

<220>
<223> CDR domain from phage library

<400> 13

Gln Ser Tyr Asp Phe Asp Phe Ala
1 5

<210> 14
<211> 10
<212> PRT
<213> Artificial Sequence

<220>
<223> CDR domain from phage library

<400> 14

Asp Asn Trp Phe Lys Pro Phe Ser Asp Val
1 5 10

<210> 15
<211> 8
<212> PRT
<213> Artificial Sequence

<220>
<223> CDR domain from phage library

<400> 15

Gln Gln Tyr Asp Ser Ile Pro Tyr
1 5

81408-4400 sequence listing.txt

<210> 16
 <211> 10
 <212> PRT
 <213> Artificial Sequence

<220>
 <223> CDR domain from phage library

<400> 16

Val Asn His Trp Thr Tyr Thr Phe Asp Tyr
 1 5 10

<210> 17
 <211> 8
 <212> PRT
 <213> Artificial Sequence

<220>
 <223> CDR domain from phage library

<400> 17

Gln Gln Met Ser Asn Tyr Pro Asp
 1 5

<210> 18
 <211> 17
 <212> PRT
 <213> Artificial Sequence

<220>
 <223> CDR domain from phage library

<400> 18

Gly Tyr Trp Tyr Ala Tyr Phe Thr Tyr Ile Asn Tyr Gly Tyr Phe Asp
 1 5 10 15

Asn

<210> 19
 <211> 9
 <212> PRT
 <213> Artificial Sequence

<220>
 <223> CDR domain from phage library

<400> 19

Gln Ser Tyr Asp Asn Asn Ser Asp Val
 1 5

<210> 20
 <211> 18
 <212> PRT

<213> Artificial Sequence

<220>

<223> CDR domain from phage library

<400> 20

Thr Trp Gln Tyr Ser Tyr Phe Tyr Tyr Leu Asp Gly Gly Tyr Tyr Phe
1 5 10 15

Asp Ile

<210> 21

<211> 8

<212> PRT

<213> Artificial Sequence

<220>

<223> CDR domain from phage library

<400> 21

Gln Gln Thr Asn Asn Ala Pro Val
1 5

<210> 22

<211> 17

<212> PRT

<213> Artificial Sequence

<220>

<223> CDR domain from phage library

<400> 22

Asn Met Ala Tyr Thr Asn Tyr Gln Tyr Val Asn Met Pro His Phe Asp
1 5 10 15

Tyr

<210> 23

<211> 8

<212> PRT

<213> Artificial Sequence

<220>

<223> CDR domain from phage library

<400> 23

Gln Ser Tyr Asp Tyr Phe Lys Leu
1 5

<210> 24

<211> 8

81408-4400 sequence listing.txt

<212> PRT
<213> Artificial Sequence

<220>
<223> CDR domain from phage library

<400> 24

Ser Tyr Tyr Pro Asp Phe Asp Tyr
1 5

<210> 25
<211> 9
<212> PRT
<213> Artificial Sequence

<220>
<223> CDR domain from phage library

<400> 25

Gln Ser Tyr Asp Gly Pro Asp Leu Trp
1 5

<210> 26
<211> 15
<212> PRT
<213> Artificial Sequence

<220>
<223> CDR domain from phage library

<400> 26

Gly Gly Gly Trp Val Ser His Gly Tyr Tyr Tyr Leu Phe Asp Leu
1 5 10 15

<210> 27
<211> 8
<212> PRT
<213> Artificial Sequence

<220>
<223> CDR domain from phage library

<400> 27

Phe Gln Tyr Gly Ser Ile Pro Pro
1 5

<210> 28
<211> 17
<212> PRT
<213> Artificial Sequence

<220>
<223> CDR domain from phage library

<400> 28

81408-4400 sequence listing.txt

Ser Met Asn Ser Thr Met Tyr Trp Tyr Leu Arg Arg Val Leu Phe Asp
1 5 10 15

His

<210> 29
<211> 9
<212> PRT
<213> Artificial sequence

<220>
<223> CDR domain from phage library

<400> 29

Gln Ser Tyr Asp Met Tyr Met Tyr Ile
1 5

<210> 30
<211> 27
<212> DNA
<213> Artificial sequence

<220>
<223> polynucleotide sequence of CDR domain from phage library

<400> 30
gattttcttg gttatgagtt tgattat 27

<210> 31
<211> 27
<212> DNA
<213> Artificial sequence

<220>
<223> polynucleotide sequence of CDR domain from phage library

<400> 31
cagagctatg actattctgc tgattat 27

<210> 32
<211> 51
<212> DNA
<213> Artificial sequence

<220>
<223> polynucleotide sequence of CDR domain from phage library

<400> 32
tattatgggt cttctcttta tcattatggt tttgggtgggt ttattgatta t 51

<210> 33
<211> 21
<212> DNA
<213> Artificial sequence

81408-4400 sequence listing.txt

```

<220>
<223> polynucleotide sequence of CDR domain from phage library

<400> 33
cagtctcatc atttttatga g                                21

<210> 34
<211> 60
<212> DNA
<213> Artificial Sequence

<220>
<223> polynucleotide sequence of CDR domain from phage library

<400> 34
tatcattcctt ggtatgagat gggttattat ggttctactg ttggttatat gtttgattat    60

<210> 35
<211> 24
<212> DNA
<213> Artificial Sequence

<220>
<223> polynucleotide sequence of CDR domain from phage library

<400> 35
cagagctatg actttgattt tgct                                24

<210> 36
<211> 30
<212> DNA
<213> Artificial Sequence

<220>
<223> polynucleotide sequence of CDR domain from phage library

<400> 36
gataattggt ttaagccttt ttctgatggt                            30

<210> 37
<211> 24
<212> DNA
<213> Artificial Sequence

<220>
<223> polynucleotide sequence of CDR domain from phage library

<400> 37
cagcagtatg attctattcc ttat                                24

<210> 38
<211> 30
<212> DNA
<213> Artificial Sequence

<220>
<223> polynucleotide sequence of CDR domain from phage library

```

81408-4400 sequence listing.txt

<400> 38		
gttaatcatt ggacttatac ttttgattat		30
<210> 39		
<211> 24		
<212> DNA		
<213> Artificial Sequence		
<220>		
<223> polynucleotide sequence of CDR domain from phage library		
<400> 39		
cagcagatgt ctaattatcc tgat		24
<210> 40		
<211> 51		
<212> DNA		
<213> Artificial Sequence		
<220>		
<223> polynucleotide sequence of CDR domain from phage library		
<400> 40		
ggttattgggt atgcttattt tacttatatt aattatgggt attttgataa t		51
<210> 41		
<211> 27		
<212> DNA		
<213> Artificial Sequence		
<220>		
<223> polynucleotide sequence of CDR domain from phage library		
<400> 41		
cagagctatg acaataattc tgatggt		27
<210> 42		
<211> 45		
<212> DNA		
<213> Artificial Sequence		
<220>		
<223> polynucleotide sequence of CDR domain from phage library		
<400> 42		
ggtggtgggt gggtttctca tggttattat tatctttttg atctt		45
<210> 43		
<211> 24		
<212> DNA		
<213> Artificial Sequence		
<220>		
<223> polynucleotide sequence of CDR domain from phage library		
<400> 43		
tttcagtatg gttctattcc tcct		24

81408-4400 sequence listing.txt

<210> 44
 <211> 54
 <212> DNA
 <213> Artificial Sequence

 <220>
 <223> polynucleotide sequence of CDR domain from phage library

 <400> 44
 acttggcagt attcttattt ttattatcctt gatggtgggtt attattttga tatt 54

 <210> 45
 <211> 24
 <212> DNA
 <213> Artificial Sequence

 <220>
 <223> polynucleotide sequence of CDR domain from phage library

 <400> 45
 cagcagacta ataatgctcc tggt 24

 <210> 46
 <211> 51
 <212> DNA
 <213> Artificial Sequence

 <220>
 <223> polynucleotide sequence of CDR domain from phage library

 <400> 46
 aatatggctt atactaatta tcagtatggtt aatatgcctc attttgatta t 51

 <210> 47
 <211> 24
 <212> DNA
 <213> Artificial Sequence

 <220>
 <223> polynucleotide sequence of CDR domain from phage library

 <400> 47
 cagagctatg actatttttaa gctt 24

 <210> 48
 <211> 51
 <212> DNA
 <213> Artificial Sequence

 <220>
 <223> polynucleotide sequence of CDR domain from phage library

 <400> 48
 tctatgaatt ctactatgta ttggtatcctt cgtcgtgttc tttttgatca t 51

 <210> 49

81408-4400 sequence listing.txt

```

<211> 27
<212> DNA
<213> Artificial Sequence

<220>
<223> polynucleotide sequence of CDR domain from phage library

<400> 49
cagagctatg acatgtataa ttatatt 27

<210> 50
<211> 24
<212> DNA
<213> Artificial Sequence

<220>
<223> polynucleotide sequence of CDR domain from phage library

<400> 50
tcttattatc ctgattttga ttat 24

<210> 51
<211> 27
<212> DNA
<213> Artificial Sequence

<220>
<223> polynucleotide sequence of CDR domain from phage library

<400> 51
cagagctatg acggtcctga tcttttg 27

<210> 52
<211> 5020
<212> DNA
<213> Artificial Sequence

<220>
<223> polynucleotide sequence of cloning vector

<300>
<301> Knappik et al
<302> Fully synthetic human combinatorial antibody libraries (HuCAL)
based on modular consensus frameworks and CDRs randomized with
trinucleotides.
<303> J Mol Biol
<304> 296
<305> 1
<306> 57-86
<307> 2000-02-11
<308> pubmed/10656818
<309> 2000-02-11
<313> (1)..(5020)

<400> 52
atcgtgctga cccagccgcc ttcagtgagt ggcgcaccag gtcagcgtgt gaccatctcg 60
tgtagcggca gcagcagcaa cattggcagc aactatgtga gctggtacca gcagttgccc 120
gggacggcgc cgaaactgct gatttatgat aacaaccagc gtcctcagg cgtgccggat 180

```

81408-4400 sequence listing.txt

cgtttttagcg gatccaaaag cggcaccagc gcgagccttg cgattacggg cctgcaaagc	240
gaagacgaag cggattatta ttgccagagc tatgacatgc ctcaggctgt gtttggcggc	300
ggcacgaagt ttaaccgttc ttggccagcc gaaagccgca ccgagtgtga cgctgtttcc	360
gccgagcagc gaagaattgc aggcgaacaa agcgaccctg gtgtgcctga ttagcgactt	420
ttatccggga gccgtgacag tggcctggaa ggcagatagc agccccgtca aggcgggagt	480
ggagaccacc acaccctcca aacaaagcaa caacaagtac gcggccagca gctatctgag	540
cctgacgcct gagcagtgga agtcccacag aagctacagc tgccagggtca cgcatgaggg	600
gagcaccgtg gaaaaaacccg ttgcgccgac tgaggcctga taagcatgcg taggagaaaa	660
taaaatgaaa caaagcacta ttgcactggc actcttaccg ttgctcttca cccctgttac	720
caaagccag gtgcaattga aagaaagcgg cccggccctg gtgaaaccga cccaaaccct	780
gaccctgacc tgtacctttt ccggatttag cctgtccacg tctggcgctg gcgtgggctg	840
gattcgccag ccgcctggga aagccctcga gtggctggct ctgattgatt gggatgatga	900
taagtattat agcaccagcc tgaaaacgcg tctgaccatt agcaaagata cttcgaaaaa	960
tcaggtggtg ctgactatga ccaacatgga cccggtggat acggccacct attattgcgc	1020
gcgttctcct cgttatcgtg gtgcttttga ttattggggc caaggcacc cttgtgacgt	1080
tagctcagcg tcgaccaaag gtccaagcgt gtttccgctg gctccgagca gcaaaagcac	1140
cagcggcggc acggctgccc tgggctgcct ggtaaagat tatttcccgg aaccagtcac	1200
cgtgagctgg aacagcgggg cgctgaccag cggcgtgcat acctttccgg cggtgctgca	1260
aagcagcggc ctgtatagcc tgagcagcgt tgtgaccgtg ccgagcagca gcttaggcac	1320
tcagacctat atttgcaacg tgaaccataa accgagcaac accaaaagtgg ataaaaaagt	1380
ggaaccgaaa agcgaattcg actataaaga tgacgatgac aaaggcgcgc cgtggagcca	1440
cccgcagttt gaaaaatgat aagcttgacc tgtgaagtga aaaatggcgc agattgtgcg	1500
acatTTTTTT tgtctgccgt ttaattaaag gggggggggg gccggcctgg gggggggtgt	1560
acatgaaatt gtaaacgtta atatTTTgtt aaaattcgcg ttaaTTTTT gttaaatacag	1620
ctcattTTTT aaccaatagg ccgaaatcgg caaaatccct tataaatcaa agaatagac	1680
cgagataggg ttgagtgttg ttccagtttg gaacaagagt ccactattaa agaacgtgga	1740
ctccaacgct aaagggcgaa aaaccgtcta tcagggcgat ggcccactac gagaaccatc	1800
accctaataca agTTTTTTgg ggtcgagggt ccgtaaagca ctaaatacgga accctaaggg	1860
gagccccga tttagagctt gacggggaaa gccggcgaac gtggcgagaa aggaagggaa	1920
gaaagcgaag ggagcgggcg ctagggcgct ggcaagtgtg gcggtcacgc tgcgcgtaac	1980
caccacaccc gccgcgctta atgcgccgct acagggcgcg tgctagacta gtgtttaaac	2040

81408-4400 sequence listing.txt

cggaccgggg	gggggcttaa	gtgggctgca	aaacaaaacg	gcctcctgtc	aggaagccgc	2100
ttttatcggg	tagcctcact	gcccgccttc	cagtcgggaa	acctgtcgtg	ccagctgcat	2160
cagtgaatcg	gccaacgcgc	ggggagaggc	ggtttgcgta	ttgggagcca	gggtggtttt	2220
tcttttcacc	agtgagacgg	gcaacagctg	attgcccttc	accgcctggc	cctgagagag	2280
ttgcagcaag	cgggtccacgc	tggtttgccc	cagcaggcga	aaatcctgtt	tgatggtggt	2340
cagcggcggg	atataacatg	agctgtcctc	ggtatcgtcg	tatcccacta	ccgagatgtc	2400
cgcaccaacg	cgcagcccgg	actcggtaat	ggcacgcatt	gcgcccagcg	ccatctgatc	2460
gttggcaacc	agcatcgcag	tggaacgat	gccctcattc	agcatttgca	tggtttgttg	2520
aaaaccggac	atggcactcc	agtcgccttc	ccgttccgct	atcggctgaa	tttgattgcg	2580
agtgagatat	ttatgccagc	cagccagacg	cagacgcgcc	gagacagaac	ttaatgggccc	2640
agctaacagc	gcgatttgct	ggtggcccaa	tgcgaccaga	tgctccacgc	ccagtcgcgt	2700
accgtcctca	tgggagaaaa	taatactgtt	gatgggtgtc	tggtcagaga	catcaagaaa	2760
taacgccgga	acattagtgc	aggcagcttc	cacagcaata	gcatacctggt	catccagcgg	2820
atagttaata	atcagcccac	tgacacgttg	cgcgagaaga	ttgtgcaccg	ccgctttaca	2880
ggcttcgacg	ccgcttcggt	ctaccatcga	cacgaccacg	ctggcaccca	gttgatcggc	2940
gcgagattta	atcgccgcga	caatttgcgga	cggcgcggtg	agggccagac	tggaggtggc	3000
aacgccaatc	agcaacgact	gtttgcccgc	cagttgttgt	gccacgcggt	taggaatgta	3060
attcagctcc	gccatcgccg	cttccacttt	ttcccgcggt	ttcgcagaaa	cgtggctggc	3120
ctggttcacc	acgcgggaaa	cggcttgata	agagacaccg	gcatactctg	cgacatcgta	3180
taacgttact	ggtttcacat	tcaccaccct	gaattgactc	tcttccgggc	gctatcatgc	3240
cataccgcga	aagggttttg	gccattcgat	gctagccatg	tgagcaaaaag	gccagcaaaa	3300
ggccaggaac	cgtaaaaagg	ccgcgttgct	ggcgtttttc	cataggctcc	gccccctga	3360
cgagcatcac	aaaaatcgac	gctcaagtca	gagggtggcg	aacccgacag	gactataaag	3420
ataccaggcg	tttccccctg	gaagctccct	cgtgcgctct	cctgttccga	ccctgccgct	3480
taccggatac	ctgtccgcct	ttctcccttc	gggaagcgtg	gcgctttctc	atagctcacg	3540
ctgtaggtat	ctcagttcgg	tgtaggtcgt	tcgctccaag	ctgggctgtg	tgacgaacc	3600
ccccgttcag	cccgaaccgt	gcgccttata	cggtaactat	cgtcttgagt	ccaacccggt	3660
aagacacgac	ttatcgccac	tggcagcagc	cactggtaac	aggattagca	gagcgaggta	3720
tgtaggcggt	gctacagagt	tcttgaagtg	gtggcctaac	tacggctaca	ctagaagaac	3780
agtatttggt	atctgcgctc	tgctgtagcc	agttaccttc	ggaaaaagag	ttggtagctc	3840
ttgatccggc	aaacaaacca	ccgctggtag	cgggtggtttt	tttgtttgca	agcagcagat	3900
tacgcgcaga	aaaaaaggat	ctcaagaaga	tcctttgatc	ttttctacgg	ggtctgacgc	3960

81408-4400 sequence listing.txt

```

tcagtggaac gaaaactcac gttaagggat tttggtcaga tctagcacca ggcgtttaag 4020
ggcaccaata actgccttaa aaaaattacg ccccgccctg ccactcatcg cagtactggt 4080
gtaattcatt aagcattctg ccgacatgga agccatcaca aacggcatga tgaacctgaa 4140
tcgccagcgg catcagcacc ttgtcgcctt gcgtataata tttgcccata gtgaaaacgg 4200
gggcgaagaa gttgtccata ttggctacgt ttaaatacaa actggtgaaa ctcaccagg 4260
gattggctga gacgaaaaac atattctcaa taaacccttt agggaaatag gccagggttt 4320
caccgtaaca cgccacatct tgcgaatata tgtgtagaaa ctgccgaaa tcgtcgtggt 4380
attcactcca gagcgatgaa aacgtttcag tttgctcatg gaaaacggtg taacaagggt 4440
gaacactatc ccatatcacc agctcaccgt ctttcattgc catacggaa tccgggtgag 4500
cattcatcag gcgggcaaga atgtgaataa aggccggata aaacttgtgc ttatttttct 4560
ttacgggtctt taaaaaggcc gtaatatcca gctgaacggt ctggttatag gtacattgag 4620
caactgactg aaatgcctca aaatgttctt tacgatgcca ttgggatata tcaacggtgg 4680
tatatccagt gatTTTTTtcc tccatttttag cttccttagc tcctgaaaat ctcgataact 4740
caaaaaatac gcccggtagt gatcttattt cattatggtg aaagtgggaa cctcaccgga 4800
cgtctaattg gagttagctc actcattagg caccacaggc ttacacttt atgcttccgg 4860
ctcgtatggt gtgtggaatt gtgagcggat aacaatttca cacaggaaac agctatgacc 4920
atgattacga atttctagat aacgaggggca aaaaatgaaa aagacagcta tcgcgattgc 4980
agtggcactg gctggtttcg ctaccgtagc gcaggccgat 5020

```

```

<210> 53
<211> 4151
<212> DNA
<213> Artificial Sequence

```

```

<220>
<223> polynucleotide sequence of cloning vector

```

```

<300>
<301> knappik et al
<302> Fully synthetic human combinatorial antibody libraries (HuCAL)
based on modular consensus frameworks and CDRs randomized with
trinucleotides.
<303> j mol biol
<304> 296
<305> 1
<306> 57-86
<307> 2000-02-11
<308> pubmed/10656818
<309> 2000-02-11
<313> (1)..(4151)

```

```

<400> 53
tctagataac gagggcaaaa aatgaaaaag acagctatcg cgattgcagt ggcactggct 60

```

81408-4400 sequence listing.txt

ggtttcgcta ccgtagcgca ggccgatatc gtgctgaccc agagcccggc gaccctgagc	120
ctgtctccgg gcgaacgtgc gaccctgagc tgcagagcga gccagagcgt gagcagcagc	180
tatctggcgt ggtaccagca gaaaccaggt caagcaccgc gtctattaat ttatggcgcg	240
agcagccgtg caactggggg cccggcgcggt tttagcggct ctggatccgg cacggatttt	300
accctgacca ttagcagcct ggaacctgaa gactttgcgg tgtattattg ccagcagcat	360
tataaccacc cgccgacctt tggccagggg acgaaagttg aaattaaacg tacggtggct	420
gctccgagcg tgtttatttt tccgccgagc gatgaacaac tgaaaagcgg cacggcgagc	480
gtggtgtgcc tgctgaacaa cttttatccg cgtgaagcga aagttcagtg gaaagtagac	540
aacgcgtgc aaagcggcaa cagccaggaa agcgtgaccg aacaggatag caaagatagc	600
acctattctc tgagcagcac cctgaccctg agcaaagcgg attatgaaaa acataaagtg	660
tatgcgtgcg aagtgacca tcaaggctctg agcagcccgg tgactaaatc ttttaatcgt	720
ggcgaggcct gataagcatg cgtaggagaa aataaaatga aacaaagcac tattgcactg	780
gcactcttac cgttgctctt caccctgtt accaaagccg aagtgcatt ggtggaaagc	840
ggcggcgcc tgggtgaacc gggcggcagc ctgcgtctga gctgcgcggc ctccgattt	900
acctttagca gctatgcgat gagctgggtg cgccaagccc ctgggaaggg tctcgagtgg	960
gtgagcgca ttagcggtag cggcggcagc acctattatg cggatagcgt gaaaggccgt	1020
tttaccattt cacgtgataa ttcgaaaaac accctgtatc tgcaaataaa cagcctgcgt	1080
gcggaagata cggccgtgta ttattgcgcg cgttggggcg gcgatggctt ttatgcgatg	1140
gattattggg gccaaaggcac cctggtgacg gttagctcag cgtcgaccaa aggtccaagc	1200
gtgtttccgc tggctccgag cagcaaaagc accagcggcg gcacggctgc cctgggctgc	1260
ctggttaaag attattttcc ggaaccagtc accgtgagct ggaacagcgg ggcgctgacc	1320
agcggcgtgc atacctttcc ggcggtgctg caaagcagcg gcctgtatag cctgagcagc	1380
gttgtagacc tgccgagcag cagcttaggc actcagacct atatttgcaa cgtgaaccat	1440
aaaccgagca acaccaaagt ggataaaaaa gtggaaccga aaagcgaatt cgggggaggg	1500
agcgggagcg gtgattttga ttatgaaaag atggcaaacg ctaataaggg ggctatgacc	1560
gaaaatgccg atgaaaacgc gctacagtct gacgctaaag gcaaacttga ttctgtcgt	1620
actgattacg gtgctgctat cgatggtttc attggtgacg tttccggcct tgctaattgg	1680
aatggtgcta ctggtgattt tgctggctct aattcccaaa tggctcaagt cggtgacgg	1740
gataattcac ctttaataaa taatttccgt caatatttac cttccctccc tcaatcggtt	1800
gaatgtcgcc cttttgtctt tggcgtggt aaaccatatg aattttctat tgattgtgac	1860
aaaataaact tattccgtgg tgtctttgcg tttcttttat atgttgccac ctttatgtat	1920
gtattttcta cgtttgctaa catactgcgt aataaggagt cttgataagc ttgacctgtg	1980

81408-4400 sequence listing.txt

aagtgaaaaa	tggcgcagat	tgtgcgacat	tttttttgtc	tgccgtttaa	tgaaattgta	2040
aacgttaata	ttttgttaaa	attcgcgtta	aatttttggt	aatcagctc	attttttaac	2100
caataggccg	aaatcggcaa	aatcccttat	aatcaaaaag	aatagaccga	gatagggttg	2160
agtgttgttc	cagtttgga	caagagtcca	ctattaaaga	acgtggactc	caacgtcaaa	2220
gggcgaaaaa	ccgtctatca	gggcgatggc	ccactacgag	aaccatcacc	ctaatacaagt	2280
tttttggggt	cgagggtgccg	taaagcacta	aatcgggaacc	ctaaagggag	cccccgattt	2340
agagcttgac	ggggaaagcc	ggcgaacgtg	gcgagaaagg	aaggggaagaa	agcgaaagga	2400
gcgggcgcta	gggcgctggc	aagtgtagcg	gtcacgctgc	gcgtaaccac	cacacccgcc	2460
gcgcttaatg	cgccgctaca	gggcgcgtgc	tagccatgtg	agcaaaaggc	cagcaaaagg	2520
ccaggaaccg	taaaaaggcc	gcgttgctgg	cgtttttcca	taggctccgc	ccccctgacg	2580
agcatcacia	aaatcgacgc	tcaagtcaga	ggtggcgaaa	cccgacagga	ctataaagat	2640
accaggcggt	tccccctgga	agctccctcg	tgcgctctcc	tggtccgacc	ctgccgctta	2700
ccggatacct	gtccgccttt	ctcccttcgg	gaagcggtgc	gctttctcat	agctcacgct	2760
gtaggtatct	cagttcggtg	taggtcgttc	gtccaagct	gggctgtgtg	cacgaacccc	2820
ccgttcagtc	cgaccgctgc	gccttatccg	gtaactatcg	tcttgagtcc	aacccggtaa	2880
gacacgactt	atcgccactg	gcagcagcca	ctggtaacag	gattagcaga	gcgaggatg	2940
taggcggtgc	tacagagttc	ttgaagtgg	ggcctaacta	cggctacact	agaagaacag	3000
tatttggtat	ctgcgctctg	ctgtagccag	ttaccttcgg	aaaaagagtt	ggtagctctt	3060
gatccggcaa	acaaaccacc	gctggtagcg	gtgggttttt	tgtttgcaag	cagcagatta	3120
cgcgcagaaa	aaaaggatct	caagaagatc	ctttgatctt	ttctacgggg	tctgacgctc	3180
agtggaacga	aaactcacgt	taagggattt	tggtcagatc	tagcaccagg	cgtttaaggg	3240
caccaataac	tgccttaaaa	aaattacgcc	ccgccctgcc	actcatcgca	gtactgttgt	3300
aattcattaa	gcattctgcc	gacatggaag	ccatcacaaa	cggcatgatg	aacctgaatc	3360
gccagcggca	tcagcacctt	gtcgccttgc	gtataatatt	tgcccatagt	gaaaacgggg	3420
gcgaagaagt	tgtccatatt	ggctacgttt	aatcaaaaac	tggtgaaact	caccagggga	3480
ttggctgaga	cgaaaaacat	attctcaata	aaccctttag	ggaaataggc	caggttttca	3540
ccgtaacacg	ccacatcttg	cgaatatatg	tgtagaaact	gccggaaatc	gtcgtggtat	3600
tcactccaga	gcgatgaaaa	cgtttcagtt	tgctcatgga	aaacggtgta	acaaggggtga	3660
acactatccc	atatcaccag	ctcaccgtct	ttcattgccca	tacggaactc	cgggtgagca	3720
ttcatcaggc	gggcaagaat	gtgaataaag	gccggataaa	acttgtgctt	atttttcttt	3780
acgggtcttta	aaaaggccgt	aatatccagc	tgaacgggtct	ggttataggt	acattgagca	3840

81408-4400 sequence listing.txt

```
actgactgaa atgcctcaaa atgttcttta cgatgccatt gggatatatc aacggtggta 3900
tatccagtga tttttttctc catttttagct tccttagctc ctgaaaatct cgataactca 3960
aaaaatacgc ccggtagtga tcttatttca ttatggtgaa agttggaacc tcacccgacg 4020
tctaattgtga gtttagctcac tcattaggca ccccgagctt tacactttat gcttccggct 4080
cgtatgttgt gtggaattgt gagcggataa caatttcaca caggaaacag ctatgaccat 4140
gattacgaat t 4151
```

```
<210> 54
<211> 306
<212> DNA
<213> Artificial Sequence
```

```
<220>
<223> polynucleotide sequence of a VL domain
```

```
<220>
<221> misc_feature
<222> (253)..(255)
<223> NNN=ACT OR GTT
```

```
<400> 54
gatatccaga tgacccagag cccgtctagc ctgagcgcga gcgtgggtga tcgtgtgacc 60
attacctgca gagcgagcca gggcattagc agctatctgg cgtggtacca gcagaaacca 120
ggtaaagcac cgaaactatt aatttatgca gccagcagct tgcaaagcgg ggtcccgtcc 180
cgtttttagcg gctctggatc cggcactgat tttaccctga ccattagcag cctgcaacct 240
gaagactttg cgnnntatta ttgccagacc tttggccagg gtacgaaagt tgaaattaaa 300
cgtagc 306
```

```
<210> 55
<211> 327
<212> DNA
<213> Artificial Sequence
```

```
<220>
<223> polynucleotide sequence of a VL domain
```

```
<400> 55
gatatccaga tgacccagag cccgtctagc ctgagcgcga gcgtgggtga tcgtgtgacc 60
attacctgca gagcgagcca gggcattagc agctatctgg cgtggtacca gcagaaacca 120
ggtaaagcac cgaaactatt aatttatgca gccagcagct tgcaaagcgg ggtcccgtcc 180
cgtttttagcg gctctggatc cggcactgat tttaccctga ccattagcag cctgcaacct 240
gaagactttg cggtttatta ttgctttcag tatggttcta ttcctcctac ctttggccag 300
ggtacgaaag ttgaaattaa acgtacg 327
```

81408-4400 sequence listing.txt

<210> 56
 <211> 309
 <212> DNA
 <213> Artificial Sequence

<220>
 <223> polynucleotide sequence of a VL domain

<220>
 <221> misc_feature
 <222> (256)..(258)
 <223> NNN=ACT OR GTT

<400> 56
 gatatcgtgc tgacccagag cccggcgacc ctgagcctgt ctccgggcga acgtgcgacc 60
 ctgagctgca gagcgagcca gagcgtgagc agcagctatc tggcgtggta ccagcagaaa 120
 ccaggtcaag caccgctctc attaatattat ggcgcgagca gccgtgcaac tgggggtccc 180
 gcgcgtttta gcggctcttg atccggcacg gattttaccc tgaccattag cagcctggaa 240
 cctgaagact ttgcgnnta ttattgccag acctttggcc aggggtacgaa agttgaaatt 300
 aaacgtacg 309

<210> 57
 <211> 330
 <212> DNA
 <213> Artificial Sequence

<220>
 <223> polynucleotide sequence of a VL domain

<400> 57
 gatatcgtgc tgacccagag cccggcgacc ctgagcctgt ctccgggcga acgtgcgacc 60
 ctgagctgca gagcgagcca gagcgtgagc agcagctatc tggcgtggta ccagcagaaa 120
 ccaggtcaag caccgctctc attaatattat ggcgcgagca gccgtgcaac tgggggtccc 180
 gcgcgtttta gcggctcttg atccggcacg gattttaccc tgaccattag cagcctggaa 240
 cctgaagact ttgcgactta ttattgccag cagatgtcta attatcctga tacctttggc 300
 cagggtacga aagttgaaat taaacgtacg 330

<210> 58
 <211> 330
 <212> DNA
 <213> Artificial Sequence

<220>
 <223> polynucleotide sequence of a VL domain

<400> 58
 gatatcgtgc tgacccagag cccggcgacc ctgagcctgt ctccgggcga acgtgcgacc 60
 ctgagctgca gagcgagcca gagcgtgagc agcagctatc tggcgtggta ccagcagaaa 120

81408-4400 sequence listing.txt

ccagggtcaag caccgcgtct attaatTTat ggcgcgagca gccgtgcaac tgggggtccc	180
gcgcgtTTtta gcggctctgg atccggcacg gatTTttaccc tgaccattag cagcctggaa	240
cctgaagact ttgcgactta ttattgccag cagactaata atgctcctgt tacctttggc	300
caggggtacga aagttgaaat taaacgtacg	330

<210> 59
 <211> 324
 <212> DNA
 <213> Artificial Sequence

<220>
 <223> polynucleotide sequence of a VL domain

<400> 59 gatatcgtga tgaccagag cccggatagc ctggcgggtga gcctgggcca acgtgcgacc	60
attaactgca gaagcagcca gagcgtgctg tatagcagca acaacaaaaa ctatctggcg	120
tggtaccagc agaaaccagg tcagccgccg aaactattaa tttattgggc atccaccgt	180
gaaagcgggg tcccggatcg ttttagcggc tctggatccg gcactgattt taccctgacc	240
atttcgtccc tgcaagctga agacgtggcg gtgtattatt gccagacctt tggccagggt	300
acgaaagttg aaattaaacg tacg	324

<210> 60
 <211> 345
 <212> DNA
 <213> Artificial Sequence

<220>
 <223> polynucleotide sequence of a VL domain

<400> 60 gatatcgtga tgaccagag cccggatagc ctggcgggtga gcctgggcca acgtgcgacc	60
attaactgca gaagcagcca gagcgtgctg tatagcagca acaacaaaaa ctatctggcg	120
tggtaccagc agaaaccagg tcagccgccg aaactattaa tttattgggc atccaccgt	180
gaaagcgggg tcccggatcg ttttagcggc tctggatccg gcactgattt taccctgacc	240
atttcgtccc tgcaagctga agacgtggcg gtgtattatt gccagcagta tgattctatt	300
ccttatacct ttggccaggg tacgaaagtt gaaattaaac gtacg	345

<210> 61
 <211> 315
 <212> DNA
 <213> Artificial Sequence

<220>
 <223> polynucleotide sequence of a VL domain

<400> 61 gatatcgcac tgaccagcc agcttcagtg agcggctcac caggtcagag cattaccatc	60
--	----

81408-4400 sequence listing.txt

```
tcgtgtacgg gtactagcag cgatgtgggc ggctataact atgtgagctg gtaccagcag 120
catccccgga aggcgccgaa actgatgatt tatgatgtga gcaaccgtcc ctcaggcgtg 180
agcaaccggt ttagcggatc caaaagcggc aacaccgcga gcctgaccat tagcggcctg 240
caagcggaag acgaagcgga ttattattgc caggacgtgt ttggcggcgg cacgaagtta 300
accgttcttg gccag 315
```

<210> 62
 <211> 336
 <212> DNA
 <213> Artificial Sequence

<220>
 <223> polynucleotide sequence of a VL domain

```
<400> 62
gatatcgcac tgaccagacc agcttcagt agcggctcac caggtcagag cattaccatc 60
tcgtgtacgg gtactagcag cgatgtgggc ggctataact atgtgagctg gtaccagcag 120
catccccgga aggcgccgaa actgatgatt tatgatgtga gcaaccgtcc ctcaggcgtg 180
agcaaccggt ttagcggatc caaaagcggc aacaccgcga gcctgaccat tagcggcctg 240
caagcggaag acgaagcgga ttattattgc cagagctatg acatgtataa ttatattgtg 300
tttggcggcg gcacgaagtt aaccgttctt ggccag 336
```

<210> 63
 <211> 330
 <212> DNA
 <213> Artificial Sequence

<220>
 <223> polynucleotide sequence of a VL domain

```
<400> 63
gatatcgcac tgaccagacc agcttcagt agcggctcac caggtcagag cattaccatc 60
tcgtgtacgg gtactagcag cgatgtgggc ggctataact atgtgagctg gtaccagcag 120
catccccgga aggcgccgaa actgatgatt tatgatgtga gcaaccgtcc ctcaggcgtg 180
agcaaccggt ttagcggatc caaaagcggc aacaccgcga gcctgaccat tagcggcctg 240
caagcggaag acgaagcgga ttattattgc cagtctcatc atttttatga ggtgtttggc 300
ggcggcacga agttaaccgt tcttggccag 330
```

<210> 64
 <211> 336
 <212> DNA
 <213> Artificial Sequence

<220>
 <223> polynucleotide sequence of a VL domain

81408-4400 sequence listing.txt

<400> 64
gatatcgac tgacccagcc agcttcagtg agcggctcac caggtcagag cattaccatc 60
tcgtgtacgg gtactagcag cgatgtgggc ggctataact atgtgagctg gtaccagcag 120
catcccggga aggcgccgaa actgatgatt tatgatgtga gcaaccgtcc ctcaggcgtg 180
agcaaccgtt ttagcggatc caaaagcggc aacaccgcga gcctgaccat tagcggcctg 240
caagcggaag acgaagcgga ttattattgc cagagctatg acaataattc tgatgttgtg 300
tttgcgggcg gcacgaagtt aaccgttctt ggccag 336

<210> 65
<211> 306
<212> DNA
<213> Artificial Sequence

<220>
<223> polynucleotide sequence of a VL domain

<400> 65
gatatcgaac tgacccagcc gccttcagtg agcgttgac caggtcagac cgcgcgtatc 60
tcgtgtagcg gcgatgcgct gggcgataaa tacgcgagct ggtaccagca gaaacccggg 120
caggcgccag ttctggtgat ttatgatgat tctgaccgtc cctcaggcat cccggaacgc 180
tttagcggat ccaacagcgg caacaccgcg accctgacca ttagcggcac tcaggcggaa 240
gacgaagcgg attattattg ccaggacgtg tttggcgggc gcacgaagtt aaccgttctt 300
ggccag 306

<210> 66
<211> 324
<212> DNA
<213> Artificial Sequence

<220>
<223> polynucleotide sequence of a VL domain

<400> 66
gatatcgaac tgacccagcc gccttcagtg agcgttgac caggtcagac cgcgcgtatc 60
tcgtgtagcg gcgatgcgct gggcgataaa tacgcgagct ggtaccagca gaaacccggg 120
caggcgccag ttctggtgat ttatgatgat tctgaccgtc cctcaggcat cccggaacgc 180
tttagcggat ccaacagcgg caacaccgcg accctgacca ttagcggcac tcaggcggaa 240
gacgaagcgg attattattg ccagagctat gactatttta agcttgtgtt tggcggcggc 300
acgaagttaa ccgttcttgg ccag 324

<210> 67
<211> 327
<212> DNA
<213> Artificial Sequence

81408-4400 sequence listing.txt

<220>

<223> polynucleotide sequence of a VL domain

<400> 67

gatatcgaac tgacccagcc gccttcagtg agcgttgcac caggtcagac cgcgcgatc	60
tcgtgtagcg gcgatgcgct gggcgataaa tacgcgagct ggtaccagca gaaacccggg	120
caggcgccag ttctggtgat ttatgatgat tctgaccgtc cctcaggcat cccggaacgc	180
tttagcggat ccaacagcgg caacaccgcg accctgacca ttagcggcac tcaggcggaa	240
gacgaagcgg attattattg ccagagctat gactattctg ctgattatgt gtttggcggc	300
ggcacgaagt taaccgttct tggccag	327

<210> 68

<211> 324

<212> DNA

<213> Artificial sequence

<220>

<223> polynucleotide sequence of a VL domain

<400> 68

gatatcgaac tgacccagcc gccttcagtg agcgttgcac caggtcagac cgcgcgatc	60
tcgtgtagcg gcgatgcgct gggcgataaa tacgcgagct ggtaccagca gaaacccggg	120
caggcgccag ttctggtgat ttatgatgat tctgaccgtc cctcaggcat cccggaacgc	180
tttagcggat ccaacagcgg caacaccgcg accctgacca ttagcggcac tcaggcggaa	240
gacgaagcgg attattattg ccagagctat gactttgatt ttgctgtgtt tggcggcggc	300
acgaagttaa ccgttcttgg ccag	324

<210> 69

<211> 327

<212> DNA

<213> Artificial sequence

<220>

<223> polynucleotide sequence of a VL domain

<400> 69

gatatcgaac tgacccagcc gccttcagtg agcgttgcac caggtcagac cgcgcgatc	60
tcgtgtagcg gcgatgcgct gggcgataaa tacgcgagct ggtaccagca gaaacccggg	120
caggcgccag ttctggtgat ttatgatgat tctgaccgtc cctcaggcat cccggaacgc	180
tttagcggat ccaacagcgg caacaccgcg accctgacca ttagcggcac tcaggcggaa	240
gacgaagcgg attattattg ccagagctat gacggctctg atctttgggt gtttggcggc	300
ggcacgaagt taaccgttct tggccag	327

<210> 70

81408-4400 sequence listing.txt

<211> 332
<212> DNA
<213> Artificial Sequence

<220>
<223> polynucleotide sequence of a VH domain

<220>
<221> misc_feature
<222> (1)..(3)
<223> NNN=GAA OR CAG

<400> 70
nnngtgcaat tggttcagtc tggcgcggaa gtgaaaaaac cgggcagcag cgtgaaagtg 60
agctgcaaag cctccggagg cacttttagc agctatgcga ttagctgggt gcgccaagcc 120
cctgggcagg gtctcgagtg gatgggcggc attattccga tttttggcac ggcgaaactac 180
gcgcagaagt ttcagggccg ggtgaccatt accgcggatg aaagcaccag caccgcgtat 240
atggaactga gcagcctgcg tagcgaagat acggccgtgt attattgcgc gcgtgattgg 300
ggccaaggca ccctggtgac ggtagctca gc 332

<210> 71
<211> 357
<212> DNA
<213> Artificial Sequence

<220>
<223> polynucleotide sequence of a VH domain

<400> 71
caggtgcaat tggttcagtc tggcgcggaa gtgaaaaaac cgggcagcag cgtgaaagtg 60
agctgcaaag cctccggagg cacttttagc agctatgcga ttagctgggt gcgccaagcc 120
cctgggcagg gtctcgagtg gatgggcggc attattccga tttttggcac ggcgaaactac 180
gcgcagaagt ttcagggccg ggtgaccatt accgcggatg aaagcaccag caccgcgtat 240
atggaactga gcagcctgcg tagcgaagat acggccgtgt attattgcgc gcgtgataat 300
tggtttaagc ctttttctga tgtttggggc caaggcacc cggtgacggt tagctca 357

<210> 72
<211> 357
<212> DNA
<213> Artificial Sequence

<220>
<223> polynucleotide sequence of a VH domain

<400> 72
caggtgcaat tggttcagtc tggcgcggaa gtgaaaaaac cgggcagcag cgtgaaagtg 60
agctgcaaag cctccggagg cacttttagc agctatgcga ttagctgggt gcgccaagcc 120
cctgggcagg gtctcgagtg gatgggcggc attattccga tttttggcac ggcgaaactac 180

81408-4400 sequence listing.txt

gcgcagaagt ttcagggccg ggtgaccatt accgcggatg aaagcaccag caccgcgtat	240
atggaactga gcagcctgcg tagcgaagat acggccgtgt attattgcgc gcgtgttaat	300
cattggactt atacttttga ttattggggc caaggcaccc tggtgacggt tagctca	357

<210> 73
 <211> 372
 <212> DNA
 <213> Artificial Sequence

<220>
 <223> polynucleotide sequence of a VH domain

<400> 73	
caggtgcaat tggttcagtc tggcgcggaa gtgaaaaaac cgggcagcag cgtgaaagtg	60
agctgcaaag cctccggagg cacttttagc agctatgcga ttagctgggt gcgccaagcc	120
cctgggcagg gtctcgagt gatgggcggc attattccga tttttggcac ggcgaactac	180
gcgcagaagt ttcagggccg ggtgaccatt accgcggatg aaagcaccag caccgcgtat	240
atggaactga gcagcctgcg tagcgaagat acggccgtgt attattgcgc gcgtgggtgt	300
ggttgggttt ctcatgggta ttattatctt tttgatcttt ggggccaagg caccctggtg	360
acggttagct ca	372

<210> 74
 <211> 332
 <212> DNA
 <213> Artificial Sequence

<220>
 <223> polynucleotide sequence of a VH domain

<220>
 <221> misc_feature
 <222> (1)..(3)
 <223> NNN=GAA OR CAG

<400> 74	
nnngtgcaat tggttcagag cggcgcggaa gtgaaaaaac cgggcgcgag cgtgaaagtg	60
agctgcaaag cctccggata tacctttacc agctattata tgcaactgggt ccgccaagcc	120
cctgggcagg gtctcgagt gatgggctgg attaaccga atagcggcgg cacgaactac	180
gcgcagaagt ttcagggccg ggtgaccatg acccgtgata ccagcattag caccgcgtat	240
atggaactga gcagcctgcg tagcgaagat acggccgtgt attattgcgc gcgtgattgg	300
ggccaaggca ccctggtgac ggtagctca gc	332

<210> 75
 <211> 378
 <212> DNA

<213> Artificial Sequence

<220>

<223> polynucleotide sequence of a VH domain

<400> 75

```
caggtgcaat tggttcagag cggcgcgga gtgaaaaaac cgggcgcgag cgtgaaagtg      60
agctgcaaag cctccggata tacctttacc agctattata tgcactgggt ccgccaagcc      120
cctgggcagg gtctcgagt gatgggctgg attaaccga atagcggcgg cacgaactac      180
gcgcagaagt ttcagggccg ggtgaccatg acccgtgata ccagcattag caccgcgtat      240
atggaactga gcagcctgcg tagcgaagat acggccgtgt attattgcgc gcgtaatatg      300
gcttatacta attatcagta tgtaatatg cctcattttg attattgggg ccaaggcacc      360
ctggtgacgg ttagctca                                     378
```

<210> 76

<211> 378

<212> DNA

<213> Artificial Sequence

<220>

<223> polynucleotide sequence of a VH domain

<400> 76

```
caggtgcaat tggttcagag cggcgcgga gtgaaaaaac cgggcgcgag cgtgaaagtg      60
agctgcaaag cctccggata tacctttacc agctattata tgcactgggt ccgccaagcc      120
cctgggcagg gtctcgagt gatgggctgg attaaccga atagcggcgg cacgaactac      180
gcgcagaagt ttcagggccg ggtgaccatg acccgtgata ccagcattag caccgcgtat      240
atggaactga gcagcctgcg tagcgaagat acggccgtgt attattgcgc gcgttctatg      300
aatttacta tgtattggt tcttcgtcgt gttctttttg atcattgggg ccaaggcacc      360
ctggtgacgg ttagctca                                     378
```

<210> 77

<211> 354

<212> DNA

<213> Artificial Sequence

<220>

<223> polynucleotide sequence of a VH domain

<400> 77

```
caggtgcaat tggttcagag cggcgcgga gtgaaaaaac cgggcgcgag cgtgaaagtg      60
agctgcaaag cctccggata tacctttacc agctattata tgcactgggt ccgccaagcc      120
cctgggcagg gtctcgagt gatgggctgg attaaccga atagcggcgg cacgaactac      180
gcgcagaagt ttcagggccg ggtgaccatg acccgtgata ccagcattag caccgcgtat      240
atggaactga gcagcctgcg tagcgaagat acggccgtgt attattgcgc gcgtgatttt      300
```

81408-4400 sequence listing.txt

cttggttatg agtttgatta ttggggccaa ggcaccctgg tgacggtag ctca 354

<210> 78
<211> 378
<212> DNA
<213> Artificial Sequence

<220>
<223> polynucleotide sequence of a VH domain

<400> 78
caggtgcaat tggttcagag cggcgcgga gtgaaaaaac cggcgcgag cgtgaaagtg 60
agctgcaaag cctccggata tacctttacc agctattata tgactgggt ccgccaagcc 120
cctgggcagg gtctcgagt gatgggctgg attaaccga atagcggcg cacgaactac 180
gcgcagaagt ttcagggccg ggtgacctg acccgtgata ccagcattag caccgcgtat 240
atggaactga gcagcctgcg tagcgaagat acggccgtgt attattgcgc gcgttattat 300
ggttcttctc ttatcatta tgttttgggt ggttttattg attattgggg ccaaggcacc 360
ctggtgacgg ttagctca 378

<210> 79
<211> 378
<212> DNA
<213> Artificial Sequence

<220>
<223> polynucleotide sequence of a VH domain

<400> 79
caggtgcaat tggttcagag cggcgcgga gtgaaaaaac cggcgcgag cgtgaaagtg 60
agctgcaaag cctccggata tacctttacc agctattata tgactgggt ccgccaagcc 120
cctgggcagg gtctcgagt gatgggctgg attaaccga atagcggcg cacgaactac 180
gcgcagaagt ttcagggccg ggtgacctg acccgtgata ccagcattag caccgcgtat 240
atggaactga gcagcctgcg tagcgaagat acggccgtgt attattgcgc gcgtggttat 300
tggtatgctt attttactta tattaattat ggttattttg ataattgggg ccaaggcacc 360
ctggtgacgg ttagctca 378

<210> 80
<211> 381
<212> DNA
<213> Artificial Sequence

<220>
<223> polynucleotide sequence of a VH domain

<400> 80
caggtgcaat tggttcagag cggcgcgga gtgaaaaaac cggcgcgag cgtgaaagtg 60

81408-4400 sequence listing.txt

agctgcaaag cctccggata tacctttacc agctattata tgcactgggt ccgccaagcc	120
cctgggcagg gtctcgagtg gatgggctgg attaaccgga atagcggcgg cacgaactac	180
gcgcagaagt ttcagggccg ggtgaccatg acccgtgata ccagcattag caccgcgtat	240
atggaactga gcagcctgcg tagcgaagat acggccgtgt attattgcgc gcgtacttgg	300
cagtattcctt atttttatta tcttgatggg ggttattatt ttgatatttg gggccaaggc	360
accctggtga cggttagctc a	381

<210> 81
 <211> 335
 <212> DNA
 <213> Artificial Sequence

<220>
 <223> polynucleotide sequence of a VH domain

<220>
 <221> misc_feature
 <222> (1)..(3)
 <223> NNN=GAA OR CAG

<400> 81	
nnngtgcaat tgaaagaaag cggcccggcc ctggtgaaac cgacccaaac cctgaccctg	60
acctgtacct tttccggatt tagcctgtcc acgtctggcg ttggcgtggg ctggattcgc	120
cagccgcctg ggaaagccct cgagtggctg gctctgattg attgggatga tgataagtat	180
tatagcacca gcctgaaaac gcgtctgacc attagcaaag atacttcgaa aaatcaggtg	240
gtgctgacta tgaccaacat ggacccgggtg gatacggcca cctattattg cgcgcgtgat	300
tggggccaaag gcaccctggg gacgggtagc tcagc	335

<210> 82
 <211> 390
 <212> DNA
 <213> Artificial Sequence

<220>
 <223> polynucleotide sequence of a VH domain

<400> 82	
caggtgcaat tgaaagaaag cggcccggcc ctggtgaaac cgacccaaac cctgaccctg	60
acctgtacct tttccggatt tagcctgtcc acgtctggcg ttggcgtggg ctggattcgc	120
cagccgcctg ggaaagccct cgagtggctg gctctgattg attgggatga tgataagtat	180
tatagcacca gcctgaaaac gcgtctgacc attagcaaag atacttcgaa aaatcaggtg	240
gtgctgacta tgaccaacat ggacccgggtg gatacggcca cctattattg cgcgcgttat	300
cattcttggg atgagatggg ttattatggg tctactgttg gttatatgtt tgattattgg	360
ggccaaggca ccctgggtgac gggttagctca	390

81408-4400 sequence listing.txt

<210> 83
 <211> 341
 <212> DNA
 <213> Artificial Sequence

<220>
 <223> polynucleotide sequence of a VH domain

<220>
 <221> misc_feature
 <222> (1)..(3)
 <223> NNN=GAA OR CAG

<400> 83
 nnngtgcaat tgcaacagtc tgggtccgggc ctggtgaaac cgagccaaac cctgagcctg 60
 acctgtgcga tttccggaga tagcgtgagc agcaacagcg cggcgtggaa ctggattcgc 120
 cagtctcctg ggcgtggcct cgagtggctg ggccgtacct attatcgtag caaatggtat 180
 aacgattatg cgggtgagcgt gaaaagccgg attaccatca acccggtataa ttcgaaaaac 240
 cagtttagcc tgcaactgaa cagcgtgacc ccggaagata cggccgtgta ttattgcgcg 300
 cgtgattggg gccaaaggcac cctggtgacg gttagctcag c 341

<210> 84
 <211> 360
 <212> DNA
 <213> Artificial Sequence

<220>
 <223> polynucleotide sequence of a VH domain

<400> 84
 caggtgcaat tgcaacagtc tgggtccgggc ctggtgaaac cgagccaaac cctgagcctg 60
 acctgtgcga tttccggaga tagcgtgagc agcaacagcg cggcgtggaa ctggattcgc 120
 cagtctcctg ggcgtggcct cgagtggctg ggccgtacct attatcgtag caaatggtat 180
 aacgattatg cgggtgagcgt gaaaagccgg attaccatca acccggtataa ttcgaaaaac 240
 cagtttagcc tgcaactgaa cagcgtgacc ccggaagata cggccgtgta ttattgcgcg 300
 cgttcttatt atcctgattt tgattattgg ggccaaggca ccctggtgac ggtagctca 360

<210> 85
 <211> 109
 <212> PRT
 <213> Artificial Sequence

<220>
 <223> polypeptide sequence of a VL domain

<400> 85

Asp Ile Glu Leu Thr Gln Pro Pro Ser Val Ser Val Ala Pro Gly Gln

81408-4400 sequence listing.txt

```

1              5              10              15
Thr Ala Arg Ile Ser Cys Ser Gly Asp Ala Leu Gly Asp Lys Tyr Ala
      20              25              30
Ser Trp Tyr Gln Gln Lys Pro Gly Gln Ala Pro Val Leu Val Ile Tyr
      35              40              45
Asp Asp Ser Asp Arg Pro Ser Gly Ile Pro Glu Arg Phe Ser Gly Ser
      50              55              60
Asn Ser Gly Asn Thr Ala Thr Leu Thr Ile Ser Gly Thr Gln Ala Glu
      65              70              75              80
Asp Glu Ala Asp Tyr Tyr Cys Gln Ser Tyr Asp Tyr Ser Ala Asp Tyr
      85              90              95
Val Phe Gly Gly Gly Thr Lys Leu Thr Val Leu Gly Gln
      100              105

<210> 86
<211> 110
<212> PRT
<213> Artificial Sequence

<220>
<223> polypeptide sequence of a VL domain

<400> 86
Asp Ile Ala Leu Thr Gln Pro Ala Ser Val Ser Gly Ser Pro Gly Gln
1              5              10              15
Ser Ile Thr Ile Ser Cys Thr Gly Thr Ser Ser Asp Val Gly Gly Tyr
      20              25              30
Asn Tyr Val Ser Trp Tyr Gln Gln His Pro Gly Lys Ala Pro Lys Leu
      35              40              45
Met Ile Tyr Asp Val Ser Asn Arg Pro Ser Gly Val Ser Asn Arg Phe
      50              55              60
Ser Gly Ser Lys Ser Gly Asn Thr Ala Ser Leu Thr Ile Ser Gly Leu
      65              70              75              80
Gln Ala Glu Asp Glu Ala Asp Tyr Tyr Cys Gln Ser His His Phe Tyr
      85              90              95
Glu Val Phe Gly Gly Gly Thr Lys Leu Thr Val Leu Gly Gln
      100              105              110

```

81408-4400 sequence listing.txt

<210> 87
 <211> 108
 <212> PRT
 <213> Artificial Sequence

<220>
 <223> polypeptide sequence of a VL domain

<400> 87

```

Asp Ile Glu Leu Thr Gln Pro Pro Ser Val Ser Val Ala Pro Gly Gln
1      5      10     15

Thr Ala Arg Ile Ser Cys Ser Gly Asp Ala Leu Gly Asp Lys Tyr Ala
      20     25     30

Ser Trp Tyr Gln Gln Lys Pro Gly Gln Ala Pro Val Leu Val Ile Tyr
      35     40     45

Asp Asp Ser Asp Arg Pro Ser Gly Ile Pro Glu Arg Phe Ser Gly Ser
      50     55     60

Asn Ser Gly Asn Thr Ala Thr Leu Thr Ile Ser Gly Thr Gln Ala Glu
65      70      75     80

Asp Glu Ala Asp Tyr Tyr Cys Gln Ser Tyr Asp Phe Asp Phe Ala Val
      85     90     95

Phe Gly Gly Gly Thr Lys Leu Thr Val Leu Gly Gln
      100    105
    
```

<210> 88
 <211> 115
 <212> PRT
 <213> Artificial Sequence

<220>
 <223> polypeptide sequence of a VL domain

<400> 88

```

Asp Ile Val Met Thr Gln Ser Pro Asp Ser Leu Ala Val Ser Leu Gly
1      5      10     15

Glu Arg Ala Thr Ile Asn Cys Arg Ser Ser Gln Ser Val Leu Tyr Ser
      20     25     30

Ser Asn Asn Lys Asn Tyr Leu Ala Trp Tyr Gln Gln Lys Pro Gly Gln
      35     40     45

Pro Pro Lys Leu Leu Ile Tyr Trp Ala Ser Thr Arg Glu Ser Gly Val
      50     55     60
    
```

81408-4400 sequence listing.txt

50

55

60

Pro Asp Arg Phe Ser Gly Ser Gly Ser Gly Thr Asp Phe Thr Leu Thr
 65 70 75 80

Ile Ser Ser Leu Gln Ala Glu Asp Val Ala Val Tyr Tyr Cys Gln Gln
 85 90 95

Tyr Asp Ser Ile Pro Tyr Thr Phe Gly Gln Gly Thr Lys Val Glu Ile
 100 105 110

Lys Arg Thr
 115

<210> 89

<211> 110

<212> PRT

<213> Artificial Sequence

<220>

<223> polypeptide sequence of a VL domain

<400> 89

Asp Ile Val Leu Thr Gln Ser Pro Ala Thr Leu Ser Leu Ser Pro Gly
 1 5 10 15

Glu Arg Ala Thr Leu Ser Cys Arg Ala Ser Gln Ser Val Ser Ser Ser
 20 25 30

Tyr Leu Ala Trp Tyr Gln Gln Lys Pro Gly Gln Ala Pro Arg Leu Leu
 35 40 45

Ile Tyr Gly Ala Ser Ser Arg Ala Thr Gly Val Pro Ala Arg Phe Ser
 50 55 60

Gly Ser Gly Ser Gly Thr Asp Phe Thr Leu Thr Ile Ser Ser Leu Glu
 65 70 75 80

Pro Glu Asp Phe Ala Thr Tyr Tyr Cys Gln Gln Met Ser Asn Tyr Pro
 85 90 95

Asp Thr Phe Gly Gln Gly Thr Lys Val Glu Ile Lys Arg Thr
 100 105 110

<210> 90

<211> 112

<212> PRT

<213> Artificial Sequence

<220>

81408-4400 sequence listing.txt

<223> polypeptide sequence of a VL domain

<400> 90

Asp Ile Ala Leu Thr Gln Pro Ala Ser Val Ser Gly Ser Pro Gly Gln
1 5 10 15

Ser Ile Thr Ile Ser Cys Thr Gly Thr Ser Ser Asp Val Gly Gly Tyr
20 25 30

Asn Tyr Val Ser Trp Tyr Gln Gln His Pro Gly Lys Ala Pro Lys Leu
35 40 45

Met Ile Tyr Asp Val Ser Asn Arg Pro Ser Gly Val Ser Asn Arg Phe
50 55 60

Ser Gly Ser Lys Ser Gly Asn Thr Ala Ser Leu Thr Ile Ser Gly Leu
65 70 75 80

Gln Ala Glu Asp Glu Ala Asp Tyr Tyr Cys Gln Ser Tyr Asp Asn Asn
85 90 95

Ser Asp Val Val Phe Gly Gly Gly Thr Lys Leu Thr Val Leu Gly Gln
100 105 110

<210> 91

<211> 109

<212> PRT

<213> Artificial sequence

<220>

<223> polypeptide sequence of a VL domain

<400> 91

Asp Ile Gln Met Thr Gln Ser Pro Ser Ser Leu Ser Ala Ser Val Gly
1 5 10 15

Asp Arg Val Thr Ile Thr Cys Arg Ala Ser Gln Gly Ile Ser Ser Tyr
20 25 30

Leu Ala Trp Tyr Gln Gln Lys Pro Gly Lys Ala Pro Lys Leu Leu Ile
35 40 45

Tyr Ala Ala Ser Ser Leu Gln Ser Gly Val Pro Ser Arg Phe Ser Gly
50 55 60

Ser Gly Ser Gly Thr Asp Phe Thr Leu Thr Ile Ser Ser Leu Gln Pro
65 70 75 80

Glu Asp Phe Ala Val Tyr Tyr Cys Phe Gln Tyr Gly Ser Ile Pro Pro
Page 41

85

90

95

Thr Phe Gly Gln Gly Thr Lys Val Glu Ile Lys Arg Thr
 100 105

<210> 92
 <211> 110
 <212> PRT
 <213> Artificial Sequence

<220>
 <223> polypeptide sequence of a VL domain

<400> 92

Asp Ile Val Leu Thr Gln Ser Pro Ala Thr Leu Ser Leu Ser Pro Gly
 1 5 10 15

Glu Arg Ala Thr Leu Ser Cys Arg Ala Ser Gln Ser Val Ser Ser Ser
 20 25 30

Tyr Leu Ala Trp Tyr Gln Gln Lys Pro Gly Gln Ala Pro Arg Leu Leu
 35 40 45

Ile Tyr Gly Ala Ser Ser Arg Ala Thr Gly Val Pro Ala Arg Phe Ser
 50 55 60

Gly Ser Gly Ser Gly Thr Asp Phe Thr Leu Thr Ile Ser Ser Leu Glu
 65 70 75 80

Pro Glu Asp Phe Ala Thr Tyr Tyr Cys Gln Gln Thr Asn Asn Ala Pro
 85 90 95

Val Thr Phe Gly Gln Gly Thr Lys Val Glu Ile Lys Arg Thr
 100 105 110

<210> 93
 <211> 108
 <212> PRT
 <213> Artificial Sequence

<220>
 <223> polypeptide sequence of a VL domain

<400> 93

Asp Ile Glu Leu Thr Gln Pro Pro Ser Val Ser Val Ala Pro Gly Gln
 1 5 10 15

Thr Ala Arg Ile Ser Cys Ser Gly Asp Ala Leu Gly Asp Lys Tyr Ala
 20 25 30

81408-4400 sequence listing.txt

Ser Trp Tyr Gln Gln Lys Pro Gly Gln Ala Pro Val Leu Val Ile Tyr
35 40 45

Asp Asp Ser Asp Arg Pro Ser Gly Ile Pro Glu Arg Phe Ser Gly Ser
50 55 60

Asn Ser Gly Asn Thr Ala Thr Leu Thr Ile Ser Gly Thr Gln Ala Glu
65 70 75 80

Asp Glu Ala Asp Tyr Tyr Cys Gln Ser Tyr Asp Tyr Phe Lys Leu Val
85 90 95

Phe Gly Gly Gly Thr Lys Leu Thr Val Leu Gly Gln
100 105

<210> 94
<211> 112
<212> PRT
<213> Artificial Sequence

<220>
<223> polypeptide sequence of a VL domain

<400> 94

Asp Ile Ala Leu Thr Gln Pro Ala Ser Val Ser Gly Ser Pro Gly Gln
1 5 10 15

Ser Ile Thr Ile Ser Cys Thr Gly Thr Ser Ser Asp Val Gly Gly Tyr
20 25 30

Asn Tyr Val Ser Trp Tyr Gln Gln His Pro Gly Lys Ala Pro Lys Leu
35 40 45

Met Ile Tyr Asp Val Ser Asn Arg Pro Ser Gly Val Ser Asn Arg Phe
50 55 60

Ser Gly Ser Lys Ser Gly Asn Thr Ala Ser Leu Thr Ile Ser Gly Leu
65 70 75 80

Gln Ala Glu Asp Glu Ala Asp Tyr Tyr Cys Gln Ser Tyr Asp Met Tyr
85 90 95

Asn Tyr Ile Val Phe Gly Gly Gly Thr Lys Leu Thr Val Leu Gly Gln
100 105 110

<210> 95
<211> 109
<212> PRT
<213> Artificial Sequence

81408-4400 sequence listing.txt

<220>

<223> polypeptide sequence of a VL domain

<400> 95

Asp Ile Glu Leu Thr Gln Pro Pro Ser Val Ser Val Ala Pro Gly Gln
1 5 10 15

Thr Ala Arg Ile Ser Cys Ser Gly Asp Ala Leu Gly Asp Lys Tyr Ala
20 25 30

Ser Trp Tyr Gln Gln Lys Pro Gly Gln Ala Pro Val Leu Val Ile Tyr
35 40 45

Asp Asp Ser Asp Arg Pro Ser Gly Ile Pro Glu Arg Phe Ser Gly Ser
50 55 60

Asn Ser Gly Asn Thr Ala Thr Leu Thr Ile Ser Gly Thr Gln Ala Glu
65 70 75 80

Asp Glu Ala Asp Tyr Tyr Cys Gln Ser Tyr Asp Gly Pro Asp Leu Trp
85 90 95

Val Phe Gly Gly Gly Thr Lys Leu Thr Val Leu Gly Gln
100 105

<210> 96

<211> 118

<212> PRT

<213> Artificial sequence

<220>

<223> polypeptide sequence of a VH domain

<400> 96

Gln Val Gln Leu Val Gln Ser Gly Ala Glu Val Lys Lys Pro Gly Ala
1 5 10 15

Ser Val Lys Val Ser Cys Lys Ala Ser Gly Tyr Thr Phe Thr Ser Tyr
20 25 30

Tyr Met His Trp Val Arg Gln Ala Pro Gly Gln Gly Leu Glu Trp Met
35 40 45

Gly Trp Ile Asn Pro Asn Ser Gly Gly Thr Asn Tyr Ala Gln Lys Phe
50 55 60

Gln Gly Arg Val Thr Met Thr Arg Asp Thr Ser Ile Ser Thr Ala Tyr
65 70 75 80

81408-4400 sequence listing.txt

Met Glu Leu Ser Ser Leu Arg Ser Glu Asp Thr Ala Val Tyr Tyr Cys
85 90 95

Ala Arg Asp Phe Leu Gly Tyr Glu Phe Asp Tyr Trp Gly Gln Gly Thr
100 105 110

Leu Val Thr Val Ser Ser
115

<210> 97
<211> 126
<212> PRT
<213> Artificial Sequence

<220>
<223> polypeptide sequence of a VH domain

<400> 97

Gln Val Gln Leu Val Gln Ser Gly Ala Glu Val Lys Lys Pro Gly Ala
1 5 10 15

Ser Val Lys Val Ser Cys Lys Ala Ser Gly Tyr Thr Phe Thr Ser Tyr
20 25 30

Tyr Met His Trp Val Arg Gln Ala Pro Gly Gln Gly Leu Glu Trp Met
35 40 45

Gly Trp Ile Asn Pro Asn Ser Gly Gly Thr Asn Tyr Ala Gln Lys Phe
50 55 60

Gln Gly Arg Val Thr Met Thr Arg Asp Thr Ser Ile Ser Thr Ala Tyr
65 70 75 80

Met Glu Leu Ser Ser Leu Arg Ser Glu Asp Thr Ala Val Tyr Tyr Cys
85 90 95

Ala Arg Tyr Tyr Gly Ser Ser Leu Tyr His Tyr Val Phe Gly Gly Phe
100 105 110

Ile Asp Tyr Trp Gly Gln Gly Thr Leu Val Thr Val Ser Ser
115 120 125

<210> 98
<211> 130
<212> PRT
<213> Artificial Sequence

<220>
<223> polypeptide sequence of a VH domain

<400> 98

81408-4400 sequence listing.txt

Gln Val Gln Leu Lys Glu Ser Gly Pro Ala Leu Val Lys Pro Thr Gln
1 5 10 15

Thr Leu Thr Leu Thr Cys Thr Phe Ser Gly Phe Ser Leu Ser Thr Ser
20 25 30

Gly Val Gly Val Gly Trp Ile Arg Gln Pro Pro Gly Lys Ala Leu Glu
35 40 45

Trp Leu Ala Leu Ile Asp Trp Asp Asp Asp Lys Tyr Tyr Ser Thr Ser
50 55 60

Leu Lys Thr Arg Leu Thr Ile Ser Lys Asp Thr Ser Lys Asn Gln Val
65 70 75 80

Val Leu Thr Met Thr Asn Met Asp Pro Val Asp Thr Ala Thr Tyr Tyr
85 90 95

Cys Ala Arg Tyr His Ser Trp Tyr Glu Met Gly Tyr Tyr Gly Ser Thr
100 105 110

Val Gly Tyr Met Phe Asp Tyr Trp Gly Gln Gly Thr Leu Val Thr Val
115 120 125

Ser Ser
130

<210> 99
<211> 119
<212> PRT
<213> Artificial Sequence

<220>
<223> polypeptide sequence of a VH domain

<400> 99

Gln Val Gln Leu Val Gln Ser Gly Ala Glu Val Lys Lys Pro Gly Ser
1 5 10 15

Ser Val Lys Val Ser Cys Lys Ala Ser Gly Gly Thr Phe Ser Ser Tyr
20 25 30

Ala Ile Ser Trp Val Arg Gln Ala Pro Gly Gln Gly Leu Glu Trp Met
35 40 45

Gly Gly Ile Ile Pro Ile Phe Gly Thr Ala Asn Tyr Ala Gln Lys Phe
50 55 60

81408-4400 sequence listing.txt

Gln Gly Arg Val Thr Ile Thr Ala Asp Glu Ser Thr Ser Thr Ala Tyr
65 70 75 80

Met Glu Leu Ser Ser Leu Arg Ser Glu Asp Thr Ala Val Tyr Tyr Cys
85 90 95

Ala Arg Asp Asn Trp Phe Lys Pro Phe Ser Asp Val Trp Gly Gln Gly
100 105 110

Thr Leu Val Thr Val Ser Ser
115

<210> 100
<211> 119
<212> PRT
<213> Artificial Sequence

<220>
<223> polypeptide sequence of a VH domain
<400> 100

Gln Val Gln Leu Val Gln Ser Gly Ala Glu Val Lys Lys Pro Gly Ser
1 5 10 15

Ser Val Lys Val Ser Cys Lys Ala Ser Gly Gly Thr Phe Ser Ser Tyr
20 25 30

Ala Ile Ser Trp Val Arg Gln Ala Pro Gly Gln Gly Leu Glu Trp Met
35 40 45

Gly Gly Ile Ile Pro Ile Phe Gly Thr Ala Asn Tyr Ala Gln Lys Phe
50 55 60

Gln Gly Arg Val Thr Ile Thr Ala Asp Glu Ser Thr Ser Thr Ala Tyr
65 70 75 80

Met Glu Leu Ser Ser Leu Arg Ser Glu Asp Thr Ala Val Tyr Tyr Cys
85 90 95

Ala Arg Val Asn His Trp Thr Tyr Thr Phe Asp Tyr Trp Gly Gln Gly
100 105 110

Thr Leu Val Thr Val Ser Ser
115

<210> 101
<211> 126
<212> PRT
<213> Artificial Sequence

81408-4400 sequence listing.txt

<220>

<223> polypeptide sequence of a VH domain

<400> 101

Gln Val Gln Leu Val Gln Ser Gly Ala Glu Val Lys Lys Pro Gly Ala
1 5 10 15

Ser Val Lys Val Ser Cys Lys Ala Ser Gly Tyr Thr Phe Thr Ser Tyr
20 25 30

Tyr Met His Trp Val Arg Gln Ala Pro Gly Gln Gly Leu Glu Trp Met
35 40 45

Gly Trp Ile Asn Pro Asn Ser Gly Gly Thr Asn Tyr Ala Gln Lys Phe
50 55 60

Gln Gly Arg Val Thr Met Thr Arg Asp Thr Ser Ile Ser Thr Ala Tyr
65 70 75 80

Met Glu Leu Ser Ser Leu Arg Ser Glu Asp Thr Ala Val Tyr Tyr Cys
85 90 95

Ala Arg Gly Tyr Trp Tyr Ala Tyr Phe Thr Tyr Ile Asn Tyr Gly Tyr
100 105 110

Phe Asp Asn Trp Gly Gln Gly Thr Leu Val Thr Val Ser Ser
115 120 125

<210> 102

<211> 124

<212> PRT

<213> Artificial sequence

<220>

<223> polypeptide sequence of a VH domain

<400> 102

Gln Val Gln Leu Val Gln Ser Gly Ala Glu Val Lys Lys Pro Gly Ser
1 5 10 15

Ser Val Lys Val Ser Cys Lys Ala Ser Gly Gly Thr Phe Ser Ser Tyr
20 25 30

Ala Ile Ser Trp Val Arg Gln Ala Pro Gly Gln Gly Leu Glu Trp Met
35 40 45

Gly Gly Ile Ile Pro Ile Phe Gly Thr Ala Asn Tyr Ala Gln Lys Phe
50 55 60

81408-4400 sequence listing.txt

Gln Gly Arg Val Thr Ile Thr Ala Asp Glu Ser Thr Ser Thr Ala Tyr
65 70 75 80

Met Glu Leu Ser Ser Leu Arg Ser Glu Asp Thr Ala Val Tyr Tyr Cys
85 90 95

Ala Arg Gly Gly Gly Trp Val Ser His Gly Tyr Tyr Tyr Leu Phe Asp
100 105 110

Leu Trp Gly Gln Gly Thr Leu Val Thr Val Ser Ser
115 120

<210> 103
<211> 127
<212> PRT
<213> Artificial Sequence

<220>
<223> polypeptide sequence of a VH domain
<400> 103

Gln Val Gln Leu Val Gln Ser Gly Ala Glu Val Lys Lys Pro Gly Ala
1 5 10 15

Ser Val Lys Val Ser Cys Lys Ala Ser Gly Tyr Thr Phe Thr Ser Tyr
20 25 30

Tyr Met His Trp Val Arg Gln Ala Pro Gly Gln Gly Leu Glu Trp Met
35 40 45

Gly Trp Ile Asn Pro Asn Ser Gly Gly Thr Asn Tyr Ala Gln Lys Phe
50 55 60

Gln Gly Arg Val Thr Met Thr Arg Asp Thr Ser Ile Ser Thr Ala Tyr
65 70 75 80

Met Glu Leu Ser Ser Leu Arg Ser Glu Asp Thr Ala Val Tyr Tyr Cys
85 90 95

Ala Arg Thr Trp Gln Tyr Ser Tyr Phe Tyr Tyr Leu Asp Gly Gly Tyr
100 105 110

Tyr Phe Asp Ile Trp Gly Gln Gly Thr Leu Val Thr Val Ser Ser
115 120 125

<210> 104
<211> 126
<212> PRT
<213> Artificial Sequence

81408-4400 sequence listing.txt

<220>

<223> polypeptide sequence of a VH domain

<400> 104

Gln Val Gln Leu Val Gln Ser Gly Ala Glu Val Lys Lys Pro Gly Ala
1 5 10 15

Ser Val Lys Val Ser Cys Lys Ala Ser Gly Tyr Thr Phe Thr Ser Tyr
20 25 30

Tyr Met His Trp Val Arg Gln Ala Pro Gly Gln Gly Leu Glu Trp Met
35 40 45

Gly Trp Ile Asn Pro Asn Ser Gly Gly Thr Asn Tyr Ala Gln Lys Phe
50 55 60

Gln Gly Arg Val Thr Met Thr Arg Asp Thr Ser Ile Ser Thr Ala Tyr
65 70 75 80

Met Glu Leu Ser Ser Leu Arg Ser Glu Asp Thr Ala Val Tyr Tyr Cys
85 90 95

Ala Arg Asn Met Ala Tyr Thr Asn Tyr Gln Tyr Val Asn Met Pro His
100 105 110

Phe Asp Tyr Trp Gly Gln Gly Thr Leu Val Thr Val Ser Ser
115 120 125

<210> 105

<211> 126

<212> PRT

<213> Artificial Sequence

<220>

<223> polypeptide sequence of a VH domain

<400> 105

Gln Val Gln Leu Val Gln Ser Gly Ala Glu Val Lys Lys Pro Gly Ala
1 5 10 15

Ser Val Lys Val Ser Cys Lys Ala Ser Gly Tyr Thr Phe Thr Ser Tyr
20 25 30

Tyr Met His Trp Val Arg Gln Ala Pro Gly Gln Gly Leu Glu Trp Met
35 40 45

Gly Trp Ile Asn Pro Asn Ser Gly Gly Thr Asn Tyr Ala Gln Lys Phe
50 55 60

81408-4400 sequence listing.txt

Gln Gly Arg Val Thr Met Thr Arg Asp Thr Ser Ile Ser Thr Ala Tyr
65 70 75 80

Met Glu Leu Ser Ser Leu Arg Ser Glu Asp Thr Ala Val Tyr Tyr Cys
85 90 95

Ala Arg Ser Met Asn Ser Thr Met Tyr Trp Tyr Leu Arg Arg Val Leu
100 105 110

Phe Asp His Trp Gly Gln Gly Thr Leu Val Thr Val Ser Ser
115 120 125

<210> 106

<211> 120

<212> PRT

<213> Artificial Sequence

<220>

<223> polypeptide sequence of a VH domain

<400> 106

Gln Val Gln Leu Gln Gln Ser Gly Pro Gly Leu Val Lys Pro Ser Gln
1 5 10 15

Thr Leu Ser Leu Thr Cys Ala Ile Ser Gly Asp Ser Val Ser Ser Asn
20 25 30

Ser Ala Ala Trp Asn Trp Ile Arg Gln Ser Pro Gly Arg Gly Leu Glu
35 40 45

Trp Leu Gly Arg Thr Tyr Tyr Arg Ser Lys Trp Tyr Asn Asp Tyr Ala
50 55 60

Val Ser Val Lys Ser Arg Ile Thr Ile Asn Pro Asp Thr Ser Lys Asn
65 70 75 80

Gln Phe Ser Leu Gln Leu Asn Ser Val Thr Pro Glu Asp Thr Ala Val
85 90 95

Tyr Tyr Cys Ala Arg Ser Tyr Tyr Pro Asp Phe Asp Tyr Trp Gly Gln
100 105 110

Gly Thr Leu Val Thr Val Ser Ser
115 120